Exam : 642-641

Title : Quality of Service Exam (QoS)

Ver : 04.05.06

QUESTION 1
Per-VC congestion avoidance discard at Layer 2 has what consequence when the ingress ATM interface discards a fragment?

A. Incomplete data packets are sent and the entire data packet must be resent.
B. The entire data packet is discarded at the ingress interface and must be resent.
C. Incomplete data packets are sent and the discarded packet fragments must be resent.
D. Data packets may be sent in cells that are out of order, causing the entire packet to be resent.

Answer: D

QUESTION 2
Why do real-time applications like VoIP require better service than traditional best effort services? (Choose three)

A. These applications are sensitive to jitter.
B. These applications are sensitive to delays.
C. Real-time applications are sensitive to packet drops.
D. Real-time applications are typically non-interactive and use mostly bulk data transfer.
E. Real-time applications typically require RSVP which cannot be run on a network using best-effort services.

Answer: A, B, E

QUESTION 3
Which statement is true about policing traffic conditions in IP QoS?

A. Policing reorders transmit queues to offer priority service to specific traffic flows.
B. Policing utilizes buffers to delay excessive traffic when the flow is higher than expected.
C. Policing techniques monitor network traffic loads in an effort to anticipate and avoid congestion.
D. Policing allows the network administrators to traffic engineer paths through the network for application flows.
E. Policing is the ability to control bursts and conform traffic to ensure certain traffic types receive specified amounts of bandwidth.

Answer: E

QUESTION 4
What is a limiting factor of IntServ scalability in large networks?

A. IntServ admission control must be implemented locally on all the routers.
B. MPLS/TE tunnels cannot be established through an MPLS network using RSVP.
C. IntServ requires the routers to track a large amount of per-flow state information.
D. IntServ requires all the routers to identify common flows that require the same service into a traffic aggregate.
E. The IntServ QoS mechanism used to apply the appropriate per-hop behavior (PHB) must be implemented on

all the routers.

Answer: D

QUESTION 5
Which three Cisco IOS QoS mechanisms have marking capabilities? (Choose three)

A. PBR
B. Committed Access Rate (CAR)
C. Weighted Random Early Detection (WRED)
D. QoS Policy Propagation through BGP (QPPB)
E. Class-Based Weighted Fair Queuing (CBWFQ)

Answer: B, C, E

QUESTION 6
How does Low Latency Queuing (LLQ) differ from IP Real-Time Transport Protocol (RTP) priority?

A. LLQ is not limited to defining traffic flows using UDP port numbers.
B. IP RTP Priority can specify traffic matches based on DSCP whereas LLQ cannot.
C. LLQ is well suited for voice traffic that is not supported in IP RTP Priority configurations.
D. LLQ priority queues suffer from "starvation" of low priority traffic due to preferential treatment of the high priority queue.

Answer: A

QUESTION 7
What are two important benefits of applying QoS to IP networks? (Choose two)

A. QoS manages packet loss during periods of bursty congestion.
B. QoS allows network managers to control usage patterns of network applications.
C. QoS can solve traffic problems on low bandwidth, high-latency, high-loss WAN links.
D. QoS facilitates the integration of differing traffic types such as voice, video, and data into a single infrastructure.
E. QoS can provide performance enhancements for commercial application issues such as server sizing and tuning.

Answer: C, D

QUESTION 8
What allows the Differential Services model to be scaled to large networking environments?

A. Differential services are accomplished through hop-by-hop application signaling.
B. The Differentiated Services model scales by providing per-flow state visibility to the core of the network.
C. Policing is not used in the Differentiated Services model providing for efficient expediting of high priority

traffic flows.
D. It achieves scalability by implementing complex classification and conditioning requirements only at network boundary nodes.
E. In the Differentiated Services model, and explicit setup mechanism predefines all QoS parameters for the packet before it is transmitted.

Answer: E

QUESTION 9
Exhibit:
interface Serial 0/1/0
ip address 10.1.1.1 255.255.255.0
random-detect
random-detect precedence 0 1 2 1
random-detect precedence 0 10 20 10
random-detect precedence 2 15 20 10
random-detect precedence 3 20 30 10
random-detect precedence 4 25 30 10
random-detect precedence 5 30 40 10
random-detect precedence 6 35 40 50
random-detect precedence 7 35 40 100
random-detect exponential-weighted-constant 11
Based on the configuration in the exhibit, which statement is true?

A. The drop probability of precedence 0 traffic is 100%.
B. The drop probability of precedence 1-5 traffic is 100%.
C. The drop probability of precedence 5 traffic is 100%.
D. The drop probability of precedence 7 traffic is 100%.

Answer: C

QUESTION 10
What is an important advantage of using Flow-based WRED (FRED) instead of standard Weighted Random Early Detection (WRED)?

A. In Cisco IOS, FRED is easier to configure than WRED.
B. FRED can classify packets using DSCP and WRED cannot.
C. FRED adds support for new protocol and traffic types including UDP.
D. With FRED, packets are not dropped indiscriminate of the kind of flows to which the packets belong.

Answer: D

QUESTION 11
In Cisco's implementation of Weighted Random Early Detection (WRED), what can packet drop decisions be based on? (Choose two)

A. DSCP
B. IP precedence
C. TCP window size
D. Interface buffer utilization
E. Interface output queue size

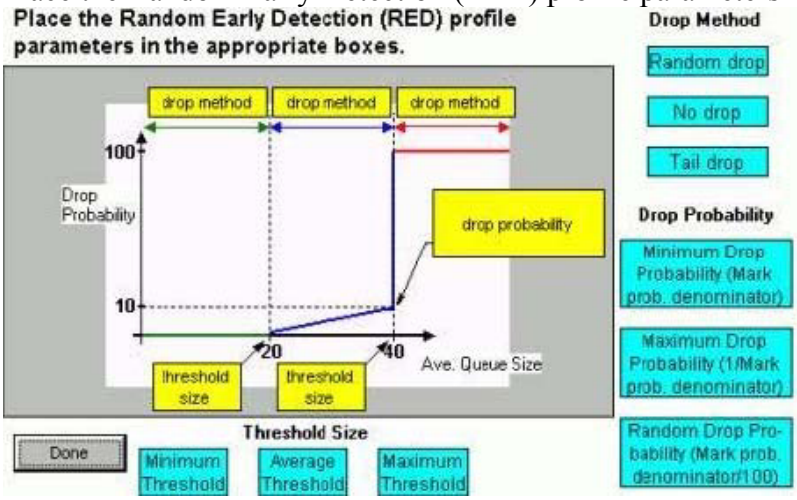
Answer: B

QUESTION 12
How does per-VC Class-Based Weighted Fair Queuing (CBWFQ) work?

A. A weight is assigned to the entire class, not to an individual flow.
Only one class can be assigned to each VC.
B. A weight is assigned to the entire class, not to an individual flow.
Multiple classes can be assigned to each VC.
C. Each flow within a class is assigned a separate weight by CBWFQ.
Only one class can be assigned to each VC.
D. Each flow within a class is assigned a separate weight by CBWFQ.
Multiple classes can be assigned to each VC.

Answer: C

QUESTION 13
Place the Random Early Detection (RED) profile parameters in the appropriate boxes.



Answer:

QUESTION 14
Which statement is true about Frame Relay Fragmentation?

A. Voice packets are never fragmented.
B. FRF.11 Annex-C is used if VoFR is configured on the DLCI.
C. FRF.12 uses separate queues for voice and non-voice traffic.
D. All DLCIs on the same physical interface must use the same fragmentation scheme.

E. An interface uses FRF.11 Annex-C or FRF.12 fragmentation for non-voice traffic and FRF 3.1 encapsulation for voice traffic.

Answer: D

QUESTION 15
What is the default MLP Link Fragmentation and Interleaving (LFI) serialization time?

A. 10 ms
B. 20 ms
C. 30 ms
D. 40 ms
E. 50 ms

Answer: B

QUESTION 16
When configuring Compressed Real-time Transport Protocol (RTP), what is the purpose of the passive keyword?

A. All RTP packets are compressed, regardless of other parameters.
B. Outgoing RTP packets are compressed; incoming RTP packets do not need to be.
C. outgoing RTP packets are compressed only if incoming RTP packets are compressed.
D. Incoming RTP packets may be compressed; all outgoing RUP packets are not compressed.

Answer: A

QUESTION 17
Which two Cisco IOS-supported payload compression algorithms search the byte stream for redundant strings, replacing them with shorter dictionary tokens? (Choose two)

A. Predictor
B. STAC (Stacker)
C. Diffie-Helman (DH)
D. Microsoft Point-to-Point Compression (MPPC)

Answer: A, C

QUESTION 18
RTP header compression can be used to reduce which three headers? (Choose three)

A. IP
B. UDP
C. RTP
D. TCP
E. PPP

Answer: A, B, C

QUESTION 19
When using Modular QoS Command Line Interface (MQC), traffic that does not have a match is _____.

A. Ignored by the MQC
B. Dropped (implicit deny all)
C. Placed in the default class
D. Process switched through the router

Answer: C

QUESTION 20
What purpose do polices in the Modular QoS Command Line Interface (MQC) serve?

A. They are used to bind polices to the interfaces.
B. They are used to define the polices for classifying data.
C. They are used to bind traffic classifications to QoS polices.
D. They are used to apply end-to-end polices in network devices.

Answer: C

QUESTION 21
Which three statements about class maps are true? (Choose three)

A. A class map can be configured within another class map.
B. Match commands are used to specify packet classification.
C. If match-any or match-all is not specified, the default behavior is match-any.
D. Traffic that does not have a match in the class map is placed in the default class.

Answer: B, C, D

QUESTION 22
What is the first step in building a service policy?

A. Use the qos-map command and specify the service policy name.
B. Use the policy-map command and specify the service policy name.
C. Use the policy-map command and specify the service policy name.
D. Use the service-policy command and specify the service policy name.

Answer: B, C

QUESTION 23
In relation to QoS, what is per-VC queuing?

A. The ability to apply polices per VC.
B. The ability to apply polices per VC bundle.
C. The ability to set the number of queues per VC.
D. The ability to set the queue depth and thresholds per VC.

Answer: D

QUESTION 24
What is Network-Based Application Recognition (NBAR)

A. NBAR is Cisco IOS software that can recognize applications that use dynamically assigned port numbers or applied services (including QoS) to them.
B. NBAR is a network server that uses agents in the routers to monitor the network to catalog the application traffic and applied services, including QoS.
C. NBAR is an application associated with RSVP that resides in the host computers and registers its network applications with RSVP to allocate the necessary bandwidth for each.
D. NBAR is an application that searched the network servers to catalog the applications that use the network. This can be used by the network administrator to apply services, including QoS.

Answer: C

QUESTION 25
What three steps are used to implement QoS using Modular QoS Command Line Interface (MQC)? (Choose three)

A. Configure marking options using a route map.
B. Configure classification options using a class map.
C. Select an output queuing strategy using a queue map.
D. Attach the QoS traffic policy to an interface in the inbound or outbound direction.
E. Configure a QoS traffic policy by associating a QoS traffic class with a QoS feature.

Answer: A, B, D

QUESTION 26
What is a purpose of the Cisco IOS Policy Propagation through BGP (QPPB) feature?

A. QPPB enables traffic shaping on BGP-enable WAN interfaces.
B. It propagates IP precedence or the QoS Group to destinations using BGP communities.
C. It allows non-CEF enabled routers to support QoS and BGP by tagging routes in the BGP table.
D. It provides flow-based Weighted Random Early Detection (WRED) support to external BGP peers.
E. It provides QoS policy in BGP networks by allowing centralized QoS configurations in BGP confederations.

Answer: D

QUESTION 27
What are two services provided through Committed Access Rate (CAR)? (Choose two)

A. Policing
B. Classification
C. Link efficiency
D. Traffic shaping
E. Weighted Random Early Discard (WRED)

Answer: D, E

QUESTION 28
Given the router configuration:
interface Ethernet 0
ip address 10.1.1.1 255.255.255.0
ip policy-map set-prec
!
route-map set-prec permit 10
match ip address 101
set ip precedence 1
!
route-map set-prec permit 20
set ip precedence 0
!
access-list 101 permit tcp any any eq telnet
!
Which of the following statements is true?

A. All telnet packets from the Ethernet 0 interface are marked with IP precedence 0.
B. All non-telnet traffic from the Ethernet 0 interface is marked with IP precedence 0.
C. All packets sourced locally by the router that goes out on the Ethernet 0 interface are marked with IP precedence 1.
D. All telnet packets sourced locally by the router that goes out on the Ethernet 0 interface are marked with IP precedence 1.

Answer: D

QUESTION 29
When configuring policy-based routing on Cisco IOS routers, which three steps are required? (Choose three)

A. Assign the policy to an interface.
B. Enable local policy-based routing.
C. Enable fast-switched policy-based routing.
D. Specify the match criteria and resulting action.
E. Define a route map to be used by policy-based routing.

Answer: A, D, E

QUESTION 30
What is the effect of enabling Weighted Fair Queuing (WFQ) on a low-speed router interface?

A. Delay is guaranteed for high-priority traffic types.
B. Bandwidth is guaranteed for different traffic queues.
C. Fixed-size queues are pre-allocated for different traffic flows.
D. Low-bandwidth traffic receives priority over high-bandwidth traffic.

Answer: C

QUESTION 31
When would Cisco IOS bypass the transmit software queue on an interface and place the packet directly into the hardware queue?

A. When LLQ has been enabled.
B. When the software queue is full.
C. When the software queue is empty.
D. When the software queue has reached its MCC.

Answer: A

QUESTION 32
Which statement is true about the queuing scheme of IP Real Time Transport Protocol (RTP) prioritization?

A. It supports TCP traffic.
B. It is usually used for interactive traffic.
C. It provides low latency queuing by providing a high priority queue.
D. Packets that exceed the queue's configured rate are placed into the default queue.

Answer: A

QUESTION 33
What are two version of distributed WFQ (dWFQ)? (Choose two)

A. flow-based dWFQ
B. ToS-based dWFQ
C. CAR-based dWFQ
D. QPPB-based dWFQ
E. DiffServ-based dWFQ
F. precedence-based dWFQ

Answer: D, E

QUESTION 34
Which bit in the ATM header can be marked by the Class Based Marker to extend IP QoS policy into an ATM network?

A. DE
B. PTI
C. CLP
D. BECN
E. FECN

Answer: C

QUESTION 35
What can happen when you properly configure Priority Queuing on Cisco IOS routers?

A. A starvation condition can occur in which lower priority queues are never serviced.
B. Priority Queuing overhead can be too great for slow WAN link, causing buffer exhaustion.
C. The high priority queue has a default queue limit of 80, that can result in excessive packet loss.
D. By default, unclassified packets are placed into the high priority output queue, which can affect high priority traffic.

Answer: D

QUESTION 36
Exhibit:
```
interface s0/0
custom-queue-list 5
!
queue-list 5 protocol ip 1 list 101
queue-list 5 queue 1 limit 40
queue-list 5 lowest-custom 2
queue-list 5 interface e0/0 2
queue-list 5 queue 2 byte-count 5000
queue-list 5 protocol ip 3
queue-list 5 queue 3 byte-count 5000
queue-list 5 queue 4 default
!
access-list 101 permit ip any any precedence 5
```
Given the configuration in the exhibit, which queue is used for traffic from e0/0 with a precedence of five?

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

Answer: B

QUESTION 37
Which statement is true about how Priority Queuing services its queues?

A. The highest priority queue containing packets is serviced until it is empty.
B. The highest priority queue is always serviced first.
The remaining queues are serviced in a TDM fashion.
C. A high priority queue is serviced until it is empty, then the service engine moves to the next highest priority queue in a round-robin fashion.
D. The highest priority queue is allocated 50% of the available bandwidth.
Each remaining queue is allocated 50& of the remaining bandwidth.

Answer: B

QUESTION 38
By default, what scheduling mechanism does Custom Queuing use?

A. FIFO
B. top down
C. weighted
D. round robin

Answer: C

QUESTION 39
What two operating modes are supported by the Modified Deficit Round Robin (MDRR) service algorithm? (Choose two)

A. FIFO
B. strict priority
C. shared priority
D. alternate priority
E. weighted priority

Answer: C, E

QUESTION 40
What is a drawback if FIFO queuing?

A. It can produce excessive jitter.
B. It only supports a queue size of 40 packets.
C. It only supports packet classification based upon traffic flows.
D. It is only available on interfaces that operate at 2 Mbps or higher.

Answer: D

QUESTION 41
Exhibit:
interface s0/0
bandwidth 128
ip address 10.0.0.1 255.255.255.252
encapsulation ppp
fair-queue
ip rtp priority 16384 16383 50
Given the configuration in the exhibit, how much bandwidth is available to the fair queues?

A. 46 Kbps
B. 50 Kbps
C. 65 Kbps
D. 78 Kbps
E. 128 Kbps

Answer: B

QUESTION 42
During periods of traffic congestion, which packet will Weighted Fair Queuing (WFQ) drop?

A. The newest packet.
B. The largest packet.
C. The packet with the lowest priority.
D. The packet with the worst finish time.

Answer: A

QUESTION 43
Why is Weighted Fair Queuing (WFQ) disabled on WAN interfaces using X.25, SDLC, LAPB, or reliable PPP encapsulations?

A. These protocols require strict priority scheduling which is not supported by WFQ.
B. These encapsulations require sequenced packets which is contradictory to WFQ operation.
C. Each of these protocols has a pre-defined queuing scheme that must be used with that protocol.
D. These protocols require delay characteristics which cannot be met by WFQ-enabled routers.

Answer: A

QUESTION 44
Which three markers can be set by Committed Access Rate (CAR)? (Choose three)

A. DSCP bits

B. QoS Group
C. ATM CLP bit
D. IP precedence bits
E. Frame Relay DE bit

Answer: C, D, E

QUESTION 45
Why is DiffServ model more scalable than the IntServ model? (Choose two)

A. DiffServ uses per-aggregate QoS instead of per-flow QoS.
B. DiffServ routers do not have to track the state information for each individual flow.
C. DiffServ uses hop-by-hop signaling which allows DiffServ to scale to a larger number of application flows.
D. DiffServ can implement admission control either locally on the routers or be offloaded to a central policy server using the COPS protocol.

Answer: C

QUESTION 46
What are two benefits of using traffic shaping to implement network rate limiting? (Choose two)

A. Traffic shaping is an effective tool for rate-limiting VoIP traffic.
B. Rate limiting with traffic shaping does not increase packet loss.
C. Rate limiting with traffic shaping does not add to packet transit delays.
D. Traffic shaping can interact with congestion mechanisms embedded in Frame Relay.
E. Traffic shaping can be used on a router in either the inbound or outbound direction.

Answer: A, E

QUESTION 47
Exhibit:
Router# show interfaces hssi 0/0/0 rate-limit
Hssi0/0/0 45Mbps to R1
Input
matches: all traffic
params: 20000000 bps, 24000 limit, 24000 extended limit
conformed 8 packets, 428 bytes; action: transmit
exceed 0 packets, 0 bytes; action: drop
last packet: 8680ms ago, current burst: 0 bytes
last cleared 00:03:59 ago, conformed 0 bps, exceed 0 bps
Output
matches: all traffic
params: 20000000 bps, 24000 limit, 24000 extended limit
conformed 0 packets, 0 bytes; action: transmit
exceed 0 packets, 0 bytes; action; drop

last packet: 8680ms ago, current burst: 0 bytes
last cleared 00:03:59 ago, conformed 0 bps, exceed 0 bps
The router in the exhibit has been configured with Committed Access Rate (CAR) to rate limit traffic.
What data rate has the traffic been limited to?

A. 192 Kbps
B. 2400 Kbps
C. 4,5 Mbps
D. 20 Mbps
E. 40 Mbps

Answer: B

QUESTION 48
Frame Relay Traffic Shaping (FRTS) is implemented along with which type of software queuing mechanism on the physical interface?

A. FIFO
B. Priority Queuing (PQ)
C. Custom Queuing (CQ)
D. Weighted Fair Queuing (WFQ)
E. IP Real Time Transport Protocol (RTP) Priority

Answer: B

QUESTION 49
What is a benefit of Enhanced LMI (ELMI) on Cisco networks?

A. ELMI provides virtual provisioning tools at the edge of the Frame Relay network.
B. ELMI enables the router to use additional QoS tools including rate limiting with CAR and the Modular QoS Command Line Interface (MQC).
C. ELMI allows the router to deliver packets at the line rate of the Frame Relay interface, regardless of the condition of the Frame Relay network.
D. ELMI allows routers to dynamically download QoS information from Cisco switches for use in traffic shaping or for congestion management purposes.

Answer: B

QUESTION 50
Exhibit:
<output omitted>
!
interface Ethernet0/0
ip address 161.24.52.1 255.255.255.0
traffic-shape group 101 1000000 125000 125000
!

interface Ethernet0/1
ip address 161.24.53.1 255.255.255.0
traffic-shape rate 5000000 625000 625000
!
access-list 101 permit udp any any
!
<output omitted>
How does the configuration shown in the exhibit affect traffic leaving the router? (Choose two)

A. All traffic leaving interface Ethernet 0/0 is rate limited to 1 Mbps.
B. All traffic leaving interface Ethernet 0/1 is rate limited to 5 Mbps.
C. All UDP traffic that enters interface Ethernet 0/0 is rate limited to 1 Mbps.
D. All non-UDP traffic that leaves interface Ethernet 0/0 can use the full line rate.
E. Excess burst capabilities have been disabled because the excess burst parameter has been configured to match the burst size.

Answer: B, ?

QUESTION 51
Which two QoS components are common to both traffic shaping and policing? (Choose two)

A. meter
B. marker
C. shaper
D. dropper
E. classifier

Answer: B, C

QUESTION 52
How is congestion managed through the use of Generic Traffic Shaping (GTS)?

A. Strict priority is maintained for classified traffic and is policed through packet discard.
B. Random Early Detection (RED) is used to selectively drop packets and avoid congestion.
C. Outbound traffic is constrained to a particular bit rate using a token bucker mechanism.
D. Call Admission Control is performed on classified traffic to ensure allocated bandwidth is not exceeded.
E. It uses multiple traffic queues that are serviced in a round-robin fashion that promotes fairness and reduces congestion.

Answer: B

QUESTION 53
Exhibit:
interface Hssi0/0/0
description 45Mbps to R2
rate-limit output access-group 101 20000000 24000 32000

conform-action set-prec-transmit 5
exceed-action set-prec-transmit0
rate-limit output access-group 102 10000000 24000 32000
conform-action set-prec-transmit 5
exceed-action drop
rate-limit output 8000000 16000 24000
conform-action set-prec-transmit 5 exceed-action drop
ip address 10.1.0.9 255.255.255.0
!
access-list 101 permit tcp any any eq www
access-list 102 permit tcp any any eq ftp
What happens to WWW traffic sent out the HSSI interface?

A. WWW traffic is rate limited to 80 Mb.
Traffic exceeding the rate policy is dropped.
B. WWW traffic is limited to 10 Mb.
Conforming traffic is sent as IP precedence 5.
Traffic exceeding the rate policy is dropped.
C. WWW traffic is limited to 20 Mb.
Conforming traffic is sent as IP precedence 5.
Traffic exceeding the rate policy is sent with best effort priority.
D. WWW traffic is limited to 10 Mb.
Conforming traffic is marked as IP precedence 5 and the next rate limit statement is executed.
Traffic exceeding the rate policy is dropped.
E. WWW traffic is limited to 20 Mb.
Conforming traffic is marked as IP precedence 5 and the next rate limit statement is executed.
Traffic exceeding the rate policy is sent with best effort priority.

Answer: C

QUESTION 54
What are two purposes of the RSVP path message? (Choose two)

A. Transports the path state to each node.
B. Distributes the path table to each RSVP node in the network.
C. Discovers all paths to the destination so that the best path can be chosen.
D. Identifies the routes used for reservation-request messages in the reverse direction.

Answer: B, C

QUESTION 55
By default, how much of the interface bandwidth is available to RSVP?

A. 25%
B. 50%
C. 75%

D. 100%

Answer: C

QUESTION 56
What are three benefits of using RSVP in an Integrated Services model? (Choose three)

A. Admission control can be based on per-request polices.
B. RSVP provides continues signaling due to its stateless architecture.
C. End-to-end, explicit resource admission control is possible with RSVP.
D. RSVP provides signaling for dynamic port numbers such as those uses in H.323.
E. RSVP is very scalable, even in the backbone, as only a small amount of information is required for each RSVP flow.

Answer: A, C, E

QUESTION 57
What is a function of classification as a building block of QoS in IP networks?

A. To recognize and distinguish different traffic streams.
B. To delay or drop packets based on specific traffic polices.
C. To provide guaranteed bandwidth to individual traffic streams.
D. To speed transmission and compress headers, improving WAN efficiency.

Answer: A

QUESTION 58
Which three types of scheduling are used by Cisco QoS features? (Choose three)

A. Round robin
B. Strict priority
C. Fair weighted
D. Modified linear
E. Weighted Random Early Detection (WRED)

Answer: A, C, E

QUESTION 59
By default, how many classes does Assured Forwarding (AF) have?

A. 1
B. 3
C. 4
D. 6
E. 8

Answer: C

QUESTION 60
Compressed Real-time Transport Protocol compresses the 40 byte IP/UDP/RTP header down to what size?

A. Usually 1 or 2 bytes
B. Usually 2 or 4 bytes
C. Usually 4 or 8 bytes
D. Usually 8 or 16 bytes
E. It varies based on the information contained in the header.

Answer: B

QUESTION 61
Which three must be present for PIM-Sparse mode to establish a multicast route through a network? (Choose three)

A. Source
B. Receiver
C. BGP path
D. Rendezvous point
E. IGMP entry in the first hop router

Answer: B, D, E

QUESTION 62
In the PIM-Spare model (PIM-SM), how dies a receiver notify the RP that it wants to receive multicast traffic?

A. It sends a Join message to the RP.
B. It sends a PIM Register message to the RP.
C. It sends a PIM Register message to the source.
D. It sends a Join message to the multicast source.
E. It sends an IGMP Membership Report to the last hop router.

Answer: E

QUESTION 63
What is a key difference between PIM-Sparse mode (PIM-SM) and PIM-Dense mode (PIMDM)?

A. PIM-SM uses CGMP to identify active source while PIM-DM uses IGMP.
B. PIM-SM uses IGMP to identify active sources while PIM-DM uses CGMP.
C. PIM-SM supports additional unicast routing protocols not supported by PIM-DM for RPF checks.
D. PIM-SM uses a push model to act as a clearinghouse of information about active sources while PIM-DM

used a pull model.
E. PIM-SM uses a bootstrap method to act as a clearinghouse of information about active sources and groups which is not present in PIM-DM.

Answer: E

QUESTION 64
What is a potential problem that can arise from configuring the rendezvous point in PIM-Sparse mode (PIM-SM) with the ip pim rp-address command without using the optional group access-list clause?

A. Sources and receivers are unable to register with the RP until the default RP is configured.
B. By default, manually configured RPs prevail over automatically learned RPs resulting in a failure in the automatic distribution of RP information.
C. No problems arise from configuring the RP using the ip pim rp-address command without the optional group access-list parameter.
D. In a mixed static RP and Auto-RP environment, Auto-RP is broken until reconfigured because its multicast groups are automatically included to operate in sparse-mode.
E. The default group range for this command is the entire multicast group range (which includes the SPT threshold groups), forcing the interface to operate on the shared path.

Answer: D

QUESTION 65
Assuming Auto_RP is in use, which two steps must be configured on a Cisco IOS router to enable multicast routing using PIM-Sparse mode (PIM-SM)? (Choose two)

A. Enable IP PIM globally on the router.
B. Enable Cisco Express Forwarding (CEF).
C. Enable IP multicast routing globally on the router.
D. Enable IP PIM on each interface that is to participate in multicast routing.
E. Configure when the PIM leaf router should join the shortest path source tree.

Answer: C, D

QUESTION 66
Why is it recommended that ip pim sparse-dense-mode be used to enable PIM instead of ip pim sparse-mode?

A. This permits sparse mode to override dense mode configuration.
B. This permits the IOS to convert dense mode configurations to sparse mode.
C. This permits the source to dynamically select either sparse or dense mode operations.
D. This permits the router to automatically determine which mode (sparse or dense) is used based upon the availability of an RP.

Answer: D

QUESTION 67
What are the two responsibilities of the Designated Forwarder (DF) in Bi-directional PIM?
(Choose two)

A. It acts as a backup RP on the multicast group.
B. It performs the RPF check for the multicast group.
C. It is the only router that forwards packets traveling downstream (toward receiver segments) onto the link.
D. It is the only router that picks up upstream traveling packets (away from the source) off the link and forwards them toward the RP.

Answer: C, D

QUESTION 68
Which command allows you to check the path towards the multicast source?

A. mrinfo
B. show ip rpf
C. show ip pim rp
D. show ip pim neighbor

Answer: B

QUESTION 69
What information is contained in the Hold time field of the PIM Join/Prune packet?

A. The amount of time the SPT threshold is maintained.
B. The amount of time the group list holds the senders information.
C. The amount of time the group list holds the receivers information.
D. The amount of time a source must keep the Join/Prune state alive.
E. The amount of time a multicast router must keep the Join/Prune state alive.

Answer: E

QUESTION 70
Which three statements are true about PIM Assert messages? (Choose three)

A. PIM Assert messages are sent reliably.
B. PIM Assert messages are used to form and maintain neighbor adjacencies.
C. In case of an equal distance/metric value, the router with the highest IP address wins the Assert.
D. A Pim Assert message is sent if thee are two or more routers forwarding the same multicast packets on the same LAN.
E. The Administrative Distance along with the actual routing metric is compared to determine the router with the best path back to the source.

Answer: C, D, E

QUESTION 71
Which two features are needed when configuring FRP .12? (Choose two)

A. Voice over Frame Relay must be enabled.
B. Voice bandwidth must be reserved on the PVC.
C. FRF .11 Annex C must be configured on the interface.
D. Frame Relay traffic shaping must be enabled on the interface.
E. Weighted Fair Queuing (WFQ) or Low Latency Queuing (LLQ) must be configured on the PVC.

Answer: B, D

QUESTION 72
Which three statements are true about PIM-Dense mode (PIM-DM)? (Choose three)

A. PIM-DM assumes that members are densely populated in the network.
B. PIM-DM is the most often used representative of "Pull" model protocols.
C. PIM-DM is the most often used representative of "Push" model protocols.
D. PIM-DM utilizes shared distribution trees, which are built from the RP down to receiver segments.
E. Multicast traffic is initially flooded to all router interfaces connected to other PIM-DM routers and group members.

Answer: A, C, E

QUESTION 73
How can TTL be used to limit the propagation of a multicast stream?

A. Use a threshold setting of zero.
B. Use a scoping with broadcast and prune multicast protocols.
C. Use a threshold to limit the forwarding of multicast traffic to outgoing packets with TTLs equal to the TTL threshold.
D. Use a threshold to limit the forwarding of multicast traffic to outgoing packets with TTLs less than the TTL threshold.
E. Use a threshold to limit the forwarding of multicast traffic to outgoing packets with TTLs greater than the TTL threshold.

Answer: E

QUESTION 74
Which is a disadvantage of PIM-Dense mode (PIM-DM)?

A. PIM dense mode does not support NBMA networks.
B. PIM dense mode only supports shared distribution trees.
C. The interface pruned state times-out every three minutes causing periodic reflooding and pruning.
D. (S,G) entries time-out and are deleted after three minutes if no packets are received via the SPT. ONCE deleted, multicast packets no longer flow on the link until an explicit join request is sent.

Answer: C

QUESTION 75
What is a disadvantage of the prune delay on multi-access networks in PIM-Dense mode (PIMDM)?

A. A join request overrides the prune request for the leaf node of the distribution tree.
B. PIM-DM uses a single timer for all interfaces contained in the outgoing interface list.
C. The three second delay is cumulative over many hops causing unwanted traffic to flow through the network.
D. If the pruned delay timer expires, all multicast traffic is disabled on that network until a join request is sent to the router.
E. The pruning mechanism is only successful if all routers on the multi-access network send a prune request within the three second prune delay.

Answer: C

QUESTION 76
What are the three basic Cisco IOS commands used to examine a router's PIM configuration? (Choose three)

A. mrinfo
B. show ip pim mrouting
C. show ip pim interface
D. show ip pim neighbors
E. show ip pim configuration

Answer: A, C, D

QUESTION 77
Which three applications are appropriate implementations of multicast? (Choose three)

A. Remote terminal
B. Video conferencing
C. Financial data delivery
D. Network management
E. Whiteboard / collaboration

Answer: B, C, E

QUESTION 78
Which protocol is used by multicast receivers to dynamically join and leave multicast groups?

A. PIM
B. CBT
C. IGMP
D. MOSPF

E. DVMRP

Answer: C

QUESTION 79
How does a multicast source identify its receivers?

A. There are currently no mechanism for this purpose.
B. The Mbone uses Session Directory (SD) to identify receivers.
C. The RCTP control component provides sources with information about the receiver's identification.
D. The TCP control component provides sources with information about the receiver's identification.

Answer: C

QUESTION 80
Which two protocols are used to determine how multicast traffic is forwarded to the receiver ports of a switch in a switched LAN environment? (Choose two)

A. CDP
B. CGMP
C. MGBP
D. MOSPF
E. IGMP Snooping

Answer: B, E

QUESTION 81
Which multicast routing protocol is used between domains?

A. PIM
B. CBT
C. IGMP
D. MBGP
E. MOSPF

Answer: D

QUESTION 82
When Link Fragmentation and Interleaving (LFI) is used, which two statements are true? (Choose two)

A. If a fragment is lost, only the fragment is retransmitted.
B. Fragments are reassembled at the final destination device.
C. A special transmit queue for delay sensitive packets is specified.
D. Each fragment from an individual packet always travels across the same link.
E. Only packets larger than the serialization time receive fragmentation headers.

Answer: B, D

QUESTION 83
Which two are required to support IGMP Snooping with Fast-Leave processing? (Choose two)

A. CGMP must be disabled.
B. Multicast hosts must send IGMP Leave messages.
C. Multicast receivers must implement the IGMPv3 protocol.
D. Multicast hosts must be connected to dedicated switch ports.

Answer: A, B

QUESTION 84
RGMP is configured on your core routers but does not appear to be working. To troubleshoot, you enter the following command on the core switch:
Switch> (enable) show multicast protocols status
CGMP enabled
IGMP disabled
IGMP fast leave disabled
RGMP disabled
GMRP disabled
To correct the problem, what should you do first?

A. set igmp enable
B. set rgmp enable
C. set pim sparse-mode
D. set multicast router (for each of the RGMP-Enabled routers)

Answer: A

QUESTION 85
What is a prerequisite to support RGMP on a switch?

A. Multicast hosts must support IGMPv2.
B. The switch must be configured for IGMP Snooping.
C. All routers connected to the switch must support RGMP.
D. At least one multicast source must be attached to the switch.
E. All neighbor switches in the same VLAN(s) must support RGMP.

Answer: B

QUESTION 86
The primary purpose for including the broadcast parameter on NBMA interfaces is to _____.

A. Replicate Layer 3 broadcasts/multicasts to Layer 3 addresses.
B. Limit the forwarding of all multicast packets to active receivers.
C. Provide efficient handling of broadcasts only (has no effect on multicasts).
D. Permit Layer 3 broadcasts/multicasts to flow between remote sites in a partial mesh network.

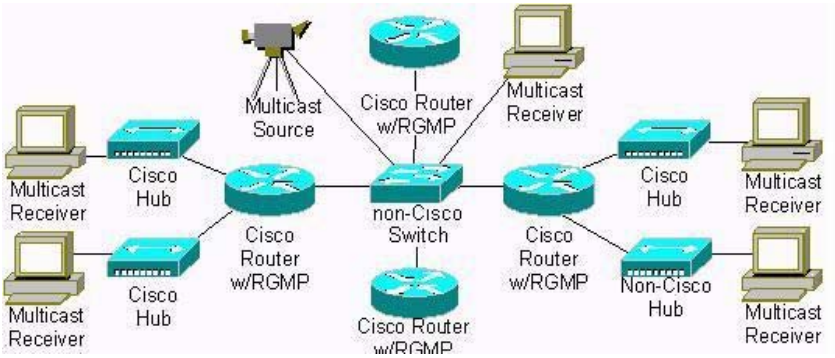
Answer: A

QUESTION 87
The purpose of the show multicast router igmp command on a switch running IGMP Snooping is to display_____.

A. A list of local routers configured with IGMP Snooping.
B. A list of multicast groups assigned to a multicast router.
C. Information about dynamically learned multicast router ports.
D. Information about manually configured multicast router ports.

Answer: C

QUESTION 88
Exhibit:



While upgrading their backbone network, your customer decides to replace their Cisco Fast Ethernet hub with a non-Cisco Ethernet switch. After a few weeks, the customer's network experiences outages that have been linked to a new multicast application.
What is most likely causing the outage?

A. The new switch does not support RGMP.
B. The new switch does not support IGMP Snooping.
C. Cisco's OSPF implementation requires Cisco LAN switches.
D. The new switch does not flood 224.0.0.x multicast addresses.

Answer: B

QUESTION 89
To optimize multicasting in an ATM NBMA environment, the command ATM multipoint signaling is used to dynamically_____.

A. Signal a remote router to enable or disable a multicast group.

B. Create P2MP VC connecting all routers with a broadcast keyword.
C. Signal a remote router to enable or disable the ATM LANE connection.
D. Create a full mesh of P2P VC connecting all routers with a broadcast keyword.

Answer: B

QUESTION 90
What are two purposes of the RSVP patch message? (Choose two)

A. Transports the path state to each node.
B. Sets up an alternate path in case of network failure.
C. Distributes the path table to each RSVP node in the network.
D. Discovers all paths to the destination so that the best path can be chosen.
E. Identifies the routers used for reservation-request messages in the reverse direction.

Answer: D, E

QUESTION 91
The show ip rsvp installed command displays what information?

A. RSVP-related interface information.
B. Current peak rate limit set for an interface.
C. RSVP neighbors installed in the adjacency table.
D. RSVP-related receiver information currently in the database.
E. RSVP-related installed filters and corresponding bandwidth information.

Answer: E

QUESTION 92
When configuring Resource Reservation Protocol (RSVP), how much of the available RSVP bandwidth is available to a single flow if you do not explicitly specify an amount?

A. 25%
B. 50%
C. 75%
D. 100%

Answer: C

QUESTION 93
Which two are important benefits of applying QoS to IP networks? (Choose two)

A. QoS manages packet loss during periods of bursty congestion.
B. QoS allows network managers to control usage patterns of network applications.
C. QoS can solve traffic problems on low bandwidth, high-latency, high-loss WAN links.
D. QoS facilities the integration of differing traffic types such as voice, video, and data into a single

infrastructure.
E. QoS can provide performance enhancements for commercial application issues such as server sizing and tuning.

Answer: C, E

QUESTION 94
How is congestion managed through the use of Generic Traffic Shaping (GTS)?

A. Strict priority is maintained for classified traffic and is policed through packet discard.
B. Random Early Detection is used to selectively drop packets and avoid congestion.
C. Outbound traffic is constrained to a particular bit rate using a token bucker mechanism.
D. Call Admission Control is performed on classified traffic to ensure allocated bandwidth is not exceeded.
E. Using multiple traffic queues that are services in a round robin fashion promotes fairness and reduces congestion.

Answer: C

QUESTION 95
Exhibit:
interface Hssi0/0/0
description 45Mbps to R2
rate-limit output access-group 101 20000000 24000 32000
conform-action set-prec-transmit 5
exceed-action set-prec-transmit 0
rate-limit output access-group 102 10000000 24000 32000
conform-action set-prec-transmit 5
exceed-action drop
rate-limit output 8000000 16000 24000
conform-action set-prec-transmit 5 exceed-action drop
ip address 10.1.0.9 255.255.255.0
!
access-list 101 permit tcp any any eq www
access-list 102 permit tcp any any eq ftp
What happens to WWW traffic sent out to the HSSI interface?

A. WWW traffic rate limited to 80 MB.
Traffic exceeding the rate policy is dropped.
B. WWW traffic is limited to 10 MB.
Conforming traffic is sent as IP Precedence 5.
Traffic exceeding the rate policy is dropped.
C. WWW traffic is limited to 20 MB.
Conforming traffic is sent as IP Precedence 5.
Traffic exceeding the rate policy is sent with best effort priority.
D. WWW traffic is limited to 20 MB.
Conforming traffic is marked as IP Precedence 5 and the next rare limit statement is executed.

Traffic exceeding the rate policy is sent with best effort priority.

Answer: C

QUESTION 96
When configuring Frame Relay Traffic Shaping (FRTS) on Cisco routers, how are traffic rates and shaping parameters defined?

A. FRTS parameters are configured using a policy map.
B. A Frame Relay map class is used to define these parameters.
C. These parameters are configured on the Frame Relay interface.
D. All FRTS parameters should be configured using the Modular QoS Command Line Interface (MQC).
E. The traffic rate is defined on the interface and the remaining QoS parameters are defined using either a QoS Group or a policy map.

Answer: B

QUESTION 97
Exhibit:
interface Fddi2/1/0
rate-limit input access-group rate-limit 100 8000000 80000
conform-action
transmit exceed-action drop
ip address 200.200.6.1 255.255.255.0
!
access-list rate-limit 100 00e0.34b0.7777
What is the result of the configuration shown in the exhibit on input traffic to the FDDI interface?

A. All input traffic on the FDDI interface is rate limited to 80 Mbps.
B. Traffic from MAC address 00e0.34b0.7777 is rate limited to 80 Mbps.
C. Traffic sent to the FDDI interface is dropped if it exceeds a rate of 512,000 bps.
D. Traffic sent from the MAC address 00e0.34.b0.7777 is dropped if it exceeds a rate of 512,000 bps
E. All traffic sent to the FDDI interface is accepted at 100 Mbps as long as it conforms to the excessive burst parameter.

Answer: B

QUESTION 98
Which command is used on Cisco IOS routers to enable Flow based WRED (FRED)?

A. router#(config)flow enable
B. router#(config)random detect
C. router#(config-if)flow enable
D. router#(config)random detect flow
E. router#(config-if)random detect flow

Answer: E

QUESTION 99
When configuring Weighted Random Early Detection (WRED), what is a potential problem that could arise if the difference between the maximum threshold and the minimum threshold is too small?

A. Too many packets could be dropped resulting in global synchronization.
B. The network could become overly congested because not enough packets are dropped as traffic levels increase.
C. The only effect of these settings is that traffic utilization peaks are greatly reduced as smaller amounts of traffic are offered to the network.
D. This condition could never occur as the Cisco IOS forces users to configure a minimum distance setting between both the minimum and maximum threshold.
E. The WRED mechanism might not recognize the maximum threshold has been hit if it is configured too close to the minimum threshold.
The result would be unmanaged congestion.

Answer: A

QUESTION 100
What is the function of Modular QoS CLI classification?

A. To classify traffic independently of QoS policies.
B. To classify traffic based on the Class Latency Index (CLI).
C. To group QoS configuration commands into modules to ease configuration.
D. To aggregate traffic into one QoS classification for operational efficiency (CPU and memory).

Answer: A

QUESTION 101
Within Modular QoS CLI, which three elements does a service policy contain? (Choose three)

A. Name
B. Policy type
C. Traffic class
D. QoS policies
E. Wildcard mask for matching policy criteria.
F. Instruction on how to evaluate the policy type.

Answer: A, C, D

QUESTION 102
You are using Modular QoS CLI to classify all packets except those that came in from a specific interface.
Which command should you use?

A. Match not interface
B. Match none interface
C. Match inverse interface
D. Match not input-interface
E. Match none input-interface
F. Match inverse input-interface

Answer: D

QUESTION 103
Under Modular QoS CLI's policies, the set command can be used to set_____.(Choose four)

A. ip dscp
B. atm-clp
C. qos-group
D. max-thresh
E. ip precedence

Answer: A, B, C, E

QUESTION 104
In the Differentiated Services model, what is the purpose of the Expedited Forwarding service class as defined in RFC 2598? (Select all that apply.)

A. Provides a traffic engineered path for packets to transit.
B. Ensures guaranteed bandwidth to a specific traffic class.
C. Provides for packet delivery with a specific reliable deliver guarantee.
D. Provides guaranteed packet forwarding with the lowest possible delay.
E. Ensures that packets traverse the network using the least loaded paths.

Answer: B, D
RFC2598

QUESTION 105
When using Modular QoS CLI to classify packets arriving from a specific MAC address, which command should you use?

A. Match mac
B. Match source
C. Match source-mac
D. Match source-address
E. Match source-address mac

Answer: E

QUESTION 106
What are Packet Description Language Modules (PDLMs)

A. Modules containing the rules used by NBAR to recognize an application.
B. A client-server application NBAR queries for network application information.
C. Modules containing a scripting language used to list applications to be recognized by NBAR.
D. An application that searched network servers to list the applications to be recognized by NBAR.

Answer: A

QUESTION 107
With Modular QoS CLI, which command should you use to display the configuration for the specified class of the specified policy map?

A. Show policy
B. Show policy-map class
C. Show policy-map service
D. Show policy-map interface

Answer: A

QUESTION 108
Which statement is true about policing traffic conditioners in IP QoS?

A. Policing records transmit queue to offer priority service to specific traffic flows.
B. Policing utilities buffers to delay excessive traffic when the flow is higher than expected.
C. Policing techniques monitor network traffic loads in an effort to anticipate and avoid congestion.
D. Policing allows network administrators to traffic engineer paths through the network for application flows.
E. Policing is the ability to control bursts and conform traffic to ensure certain traffic types receive specified amounts of bandwidth.

Answer: E

QUESTION 109
What are the two main functions of Committed Access Rate on Cisco IOS routers? (Choose two)

A. Packet classification using IP Precedence or QoS Group.
B. Bandwidth management by policing to control the maximum traffic rate.
C. Integrated services compatibility provided by an embedded RSVP signaling mechanism.
D. Integrated packet deliver de-jitter buffering mechanism to ensure real-time packet delivery.

Answer: A, B

QUESTION 110
What is the purpose of shaping traffic conditioners in IP QoS?

A. Shaping reorders transmit queues to offer priority service to specific traffic flows.
B. Shaping is a non-buffer based solution that drops packets above a specified burst rate.
C. Shaping techniques monitor network traffic loads in an effort to anticipate and avoid congestion.
D. Shaping uses packet re-write capabilities to sort traffic and maintain specific data rates for classified traffic.
E. Shaping avoids delays by smoothing out speed mismatches in the network and by limiting transmission rates.

Answer: C

QUESTION 111
What is a key benefit of using the Cisco Modular QoS Command Line Interface (MQC)?

A. Provides performance metrics for QoS configurations.
B. Eliminates the need for map classes to perform traffic classification.
C. Allows users to specify traffic classes independently from QoS polices.
D. Allows QoS policy information to be automatically distributed throughout the network.
E. Provides an integrated testing mechanism for traffic classification and QoS policy configurations.

Answer: C

QUESTION 112
What is the effect of enabling Weighted Fair Queuing (WFQ) on low-speed router interface?

A. Delay is guaranteed for high-priority traffic types.
B. Bandwidth is guaranteed for different traffic queues.
C. Fixed-size queues are pre-allocated for different traffic flows.
D. Low-bandwidth traffic receives priority over high-bandwidth traffic.

Answer: D

QUESTION 113
What are three key differences between Weighted Fair Queuing (WFQ) and distributed Weighted Fair Queuing (dWFQ)? (Choose three)

A. dWFQ distributes its queuing policy to its neighbor.
B. dWFQ requires a Versatile interface Processor (VIP) to operate.
C. dWFQ adds WFQ support on ATM, Fast Ether Channel, and tunnel interfaces.
D. dWFQ supports classed-based weighting based on TOS field and QoS Group settings.
E. In order to use dWFQ, distributed Cisco Express Forwarding (dCEF) must be enabled on the interface.

Answer: B, D, E

QUESTION 114
When configuring Priority Queuing on Cisco IOS routers, which three steps are required? (Choose three)

A. Define the priority list.
B. Configure an ACL for traffic identification.
C. Assign packets to specific priority queues.
D. Specify the maximum size of the priority queues.
E. Assign the priority list to be a designated router interface.

Answer: A, C, E

QUESTION 115
What is the concept behind the operation of the Integrated Services model?

A. Application of network policies is only performed at the edges of the network.
B. Applications send as much data, with no predefined frequency, into the network.
C. Applications request a specific kind of service from the network and receive confirmation about reserved bandwidth and delay requirements before sending any data.
D. Applications are provided with a minimum amount of guaranteed bandwidth during periods of network congestion.
In periods of non-congestion, application can utilize all available bandwidth.
E. Network administrators predefine traffic classes for each application.
As application data traverse the network, packets are inspected and the network attempts to deliver the QoS level specified within the packet.

Answer: C

QUESTION 116
Which mechanism is used by IP RTP Priority to classify packets?

A. QoS Group
B. IP Precedence
C. Access Control List (ACL)
D. Differentiated Services Code Point (DSCP)
E. Dynamically Negotiated UDP ports within a specified range.

Answer: E

QUESTION 117
What differentiates Modified Deficit Round Robin (MDRR) from Deficit Round Robin (DDR)?

A. In DDR, users can define multiple weights per queue.
B. MDRR designated one of its queues as a low-latency queue.
C. MDRR extends the number of queues supported from 8 to 32 queues.
D. DRR can facilitate guaranteed packet deliver through the use of Tx queue buffer and congestion feedback mechanisms.
E. Servicing of DDR queues is performed using a round robin weighted strategy, but in MDRR servicing is done using a FIFO strategy.

Answer: B

QUESTION 118
How is flow-based WFQ applied at the Virtual Circuit (VC) level?

A. Configure fair-queuing in the ATM VC.
B. Configure fair-queuing in the policy map.
C. Configure fair-queuing in the default class.
D. Configure fair-queuing in the service policy.

Answer: C

QUESTION 119
Exhibit:
```
class-map ixia
match input-interface FastEthernet3/0
class-map loop backs
match access-group 102
!
policy-map mypol
class ixia
bandwidth 40000
queue-limit 40
class loop backs
bandwidth 10000
class class-default
fair-queue
!
interface ATM2/0.130 point-to-point
ip address 14.0.0.2 255.0.0.0
no ip directed-broadcast
pvc 1/130
service-policy output mypol
vbr-nrt 100000 75000
broadcast
encapsulation aa15mux ip
!
access-list 102 permit ip host 10.0.0.1 host 11.0.0.1
```
Which four statements are true about the configuration in the exhibit? (Choose four)

A. CBWFQ is applied to PVC 1/130.
B. One class is applied to all the incoming traffic on Fast Ethernet 3/0.
C. Class loop backs have been assigned a minimum of 10 kbps bandwidth
D. Class ixia has been allocated 40 Mbps bandwidth and a queue depth of 40 packets.
E. Flow-based WFQ is applied to all packets that do not belong to either class ixia or loop backs.

Answer: A, B, D, E

QUESTION 120
How does RSVP-AT, QoS Interworking provide L3 QoS over ATM (L2)?

A. It builds an SVC with the desired parameters for each L3 flow.
B. It maps each L3 flow to a separate soft PVC that is configured with the appropriate parameters.
C. It dynamically builds a sub-interface for each flow and uses WFQ to achieve its bandwidth and latency requirements.
D. It dynamically allocates the L2 flow to an existing VC that can guarantee the bandwidth and latency requirements.

Answer: A

QUESTION 121
You are using IP to ATM CoS. Which action can be configured to be automatically taken should a VC in a VC bundle fail?

A. The VC can be remapped to a different bundle.
B. The VC can be declared down and an alternate route requested.
C. The circuit data can be transferred or "bumped" to a lower priority VC.
D. The circuit data can be divided equally between the remaining VCs in the bundle.

Answer: C

QUESTION 122
How is IP to ATM CoS supported in a single VC?

A. The IP Precedence bits are mapped into the unused upper bits of the VPI field.
They are treated accordingly as they are switched through the ATM network.
B. The router at the edge of the ATM network sets the ATM CLP based on the IP Precedence bits.
Lower priority packets are transported in lower priority cells.
They are treated accordingly as they are switched through the ATM network.
C. WRED/DWRED is used in the routers at the edge of the ATM network.
Based on the IP Precedence bits, IP traffic is subjected to different drop probabilities (and therefore priorities) as IP traffic coming into a router competes for bandwidth on
the ATM VC.
D. PQ-WFQ is used in the routers at the edge of the ATM network.
Based on the IP Precedence bits, IP traffic is then properly queued and de-queued as IP traffic competes for bandwidth on the ATM VC.

Answer: C

QUESTION 123
Per-Virtual Circuit (VC) congestion avoidance discard at Layer 2 has what consequence when

the ingress ATM interface discards a fragment?

A. Incomplete data packets are sent and the entire data packet must be resent.
B. The entire data packet is discarded at the ingress interface and must be resent.
C. Incomplete data packets are sent and discarded packet fragments must be resent.
D. Data packets may be sent in cells that are out of order, causing the entire packet to be resent.

Answer: B, D

QUESTION 124
What are three capabilities of the route map used in policy-based routing? (Choose three)

A. Rate limiting
B. Packet marking
C. Packet classification
D. Intelligent packet discard
E. Defining customized routing paths

Answer: B, C, E

QUESTION 125
What are two services provided through Committed Access Rate (CAR)? (Choose two)

A. Policing
B. Classification
C. Link efficiency
D. Traffic shaping
E. Congestion avoidance

Answer: A, B

QUESTION 126
How do you enable PGM on Cisco routers?

A. Router#(config) ip pgm
B. Router#(config) set pgm
C. Router#(config) ip pgm router
D. Router#(config-if) ip pgm router
E. Router#(config-if) ip pgm enable

Answer: D

QUESTION 127
What is the main purpose of the Cisco IOS QPPB feature?

A. It provides flow-based WRED support to External BGP peers.

B. QPPB enables traffic shaping on BGP enabled WAN interfaces.
C. It conveys IP Precedence or QoS Group to destinations using BGP communities.
D. It allows non-CEF enabled routers to support QoS and BGP by tagging routes in the BGP table.
E. It provides QoS policy in BGP networks by allowing centralized QoS configuration confederations.

Answer: C

QUESTION 128
What is the reason basic multicasting is problematic and unreliable?

A. IP transport
B. TCP transport
C. UDP transport
D. ICMP transport
E. RTMP transport

Answer: C

QUESTION 129
Which Designated Forwarder (DF) election mechanism is used to advertise a router's unicast metric to reach the rendezvous point?

A. Pass
B. Offer
C. Notify
D. Winner
E. Back off

Answer: B