



642-642

(Quality of Service (QOS))

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Question: 1

Which of the following qualifies to be capabilities of CB shaping? (Choose all that apply.)

- A. When it is similar to CAR with added shaping capabilities.
- B. When it can be applied only as an output but not input shaper.
- C. When it can be configured using MQC
- D. When it is dissimilar to CAR with no additional shaping capabilities.
- E. When it can be applied to individual VCs on a multipoint Frame Relay interface.

Answer: B, C

Explanation:

Class-based Shaping, like Class-based Policing, is used to rate-limit traffic within the CBWFQ queueing system. Class-based Shaping works by metering the traffic rate and delaying excessive packets until they conform to the configured shaped rate. Class-based Shaping is very similar to Generic Traffic Shaping (GTS), but is implemented as a part of the CB-WFQ system and is configured via the Cisco IOS MQC. Like GTS, Classbased Shaping has no packet marking capability.

Question: 2

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know which three are primary functions of QPM. What will your reply be? (Choose all that apply.)

- A. It can enable protocol discovery using NBAR
- B. It can verify consistency of deployed QoS policies
- C. It allows centralized enterprise-wide QoS policy
- D. It combines configuration and monitoring into one tool
- E. It scales QoS policy deployment quickly and accurately
- F. All of the above.

Answer: B, C, E

Question: 3

Which of the following tasks are necessary when configuring Service Assurance Agent (SAA agent)? (Choose all that apply.)

- A. You must schedule the operation
- B. You must configure the data collection frequency
- C. You must configure the operation type
- D. You must configure a collection probe on the router

E. You must configure timer parameters for the SAA agent

Answer: A, C

Explanation:

To configure a new SAA operation, perform the following steps, beginning in in global configuration mode: Step 1 Enter RTR configuration mode using the rtr op-number command. The op-number argument specifies an identification number for the operation you will be configuring. Step 2 Use one of the type commands to specify which type of operation you are configuring. Step 3 (Optional) Configure characteristics for the operation, one characteristic per line, using the commands found in "Configuring SAA Operation Characteristics" section. Step 4 Type exit to return to global configuration mode. Step 5 (Optional) Set reaction conditions for the operation, as explained in the "Reaction Thresholds" section. Step 6 Schedule the operation start-time, as explained in the "Scheduling the Operation" section.

Question: 4

The SSA agent is used to measure which of the following SLA metrics? (Choose all that apply.)

- A. Jitter
- B. Interface utilization
- C. Packet loss
- D. Response time
- E. Client response
- F. Router buffer allocation

Answer: A, C, D

Explanation:

The SAA allows you to measure and monitor the following:
SLA metrics such as round-trip response time and availability.
Voice-over-IP (VoIP) metrics such as jitter, packet loss, and availability of synthetic VoIP traffic.
Web metrics and applications.
Quality of Service (QoS) and accuracy metrics such as IP packet precedence levels.

Question: 5

Which of the following is part of SMS? (Choose all that apply.)

- A. QDM
- B. CiscoWorks2000 Resource Manager Essentials
- C. RSVP COPS Server

- D. Service Level Manager
- E. CiscoViewCiscoWorks 2000 Management Server
- F. All of the above

Answer: B, D, E

Explanation:

SMS includes two main components. First, the Service Level Manager (SLM) is software that runs on the same host as CiscoWorks2000. SLM provides information to the end user of SMS, and generates the configuration of the probes based on end-user input. SMS collection Managers (CMs) are software agents that run on computers spread around the network for scaling purposes, or a CM can reside on the SLM server for small installations.

Question: 6

Under which circumstances will you use QPM? (Choose all that apply.)

- A. When monitoring queue depth.
- B. When ensuring end to end QOS commitments.
- C. When measuring client response time.
- D. When defining rules that match business requirements
- E. When creating and deploying a decentralized enterprise-wide QOS policy.

Answer: B, D

Explanation:

You can use the Cisco QoS Policy Manager (QPM) to overcome the configuration correctness and consistency problem. QPM creates the QoS configurations for you, based on your input about QoS policies using a GUI. QPM loads the configurations, and re-verifies the QoS configurations to discover whether changes have been made. It can also reconfigure a router after someone has inadvertently changed the QoS configuration – automatically. Any large QoS implementation begs for the use of QPM.

Question: 7

QDM Performance Monitor will graph which of the following metrics? (Choose all that apply.)

- A. Drop Rate.
- B. Packet Collisions and FCS error rates.
- C. Pre/Post Policy Bit rate / Byte count /Packet Count.
- D. Queue Depth.

- E. Round trip packet delay.
- F. All of the above.

Answer: A, C, D

Explanation:

The QDM user can perform two types of tasks. First, the user can configure QoS tools using a graphical interface from a browser. The user can also monitor real-time statistics about QoS behavior inside the single device, including graphs of bit/byte/packets rates, drop rates, queue depth, and so on.

Question: 8

Which of the following show commands will display information regarding frame-relay fragmentation?

- A. Show frame-relay pvc
- B. Show frame-relay queue
- C. Show frame-relay fragment
- D. Show frame-relay tracert
- E. Show frame-relay traffic shaping

Answer: C

Explanation:

The show frame-relay fragment command displays statistics of Frame Relay fragmentation methods. This output shows whether Frame Relay fragmentation is in effect and working as configured. The output also shows possible fragmentation timeouts, indicating that some fragments were lost in the Frame Relay network and could not be reassembled. If the number of timeouts is significant, this may indicate significant frame loss in the Frame Relay network.

Question: 9

Disregarding fragment size, which of the following LFI mechanism never fragments voice frames?

- A. FRF .3
- B. FRF.9
- C. FRF.11 Annex C
- D. FRF.6
- E. FRF .12

Explanation:

Answer: C

FRF.11 Annex C never fragment voice frames. Only this LFI mechanism is used with voice traffic. There are three LFI mechanisms implemented in Cisco IOS: 1) Multilink PPP with Interleaving is by far the most common and widely used form of LFI. 2) FRF.11 Annex C LFI is used with Voice over Frame Relay (VoFR). 3) FRF.12 Frame Relay LFI is used with Frame Relay data connections. 4) In an ATM network, using separate PVCs carrying voice and data can be used to interleave packets when they are output on an interface.

Question: 10

Which of the following statements regarding cRTP compression is valid?

- A. IP, TCP, and RTP headers are compressed, since the headers are uncompressed on the other end of the link.
- B. UDP and RTP headers are compressed, but the IP header is not, so the VoIP packets can be delivered to the terminating gateway.
- C. IP, UDP, and RTP headers are compressed, since the headers are uncompressed on the other end of the link.
- D. TCP and RTP headers are actually removed, with a smaller header added that includes information that has changed since the last full header sent.
- E. None of the above.

Answer: C

Explanation:

When using RTP compression IP packets that also have RTP headers are compressed. The compression algorithm does not compress the data-link header or trailer. It does compress the IP, UDP, and RTP headers. It does not compress any user data that follows the RTP header.

Question: 11

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know what the approximate bandwidths required for a G.729a VoIP call with and without cRTP enabled is. What will your reply be?

- A. 5.3 Kbps/8 Kbps
- B. 11 Kbps/26 Kbps
- C. 12 Kbps/24 Kbps
- D. 28 Kbps/64 Kbps
- E. None of the above.

Answer: B

Reference:

DQOS Exam Certification Guide p.39

Question: 12

Study the Exhibit below carefully: Policy-map shape-it Class customer1 Bandwidth Class customer2 Bandwidth 384 Interface serial 3 Service-policy output shape-it You want to add CB shaping to interface serial 3, so that each customer is shaped to 64 Kbps beyond what is committed to the. Which command needs to be added to the policy map for customer 2?

- A. Shape average 448
- B. Shaping average 448
- C. Shape average 448000
- D. Shaping average 448000

Answer: C

Question: 13

**Study the Configuration below carefully:
interface multilink 1 ip addr 1.1.1.1 255.0.0.0 fair-queue ppp multilink ppp multilink
fragment-delay 140 160
Which statement will be valid for this configuration?**

- A. Fragmentation is not yet enabled.
- B. Fragmentation is only partially enabled.
- C. Fragmentation is enabled, but packets will not be interleaved.
- D. Fragmentation is enabled, and voice packets or fragments, plus packets smaller than 140 bytes, will be interleaved.
- E. Fragmentation is enabled, but only packets shorter than 160 bytes will be interleaved between fragments.

Answer: C

Explanation:

The following command is not visible ppp multilink interleave

Question: 14

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know which LFI mechanism has an option for fragmentation

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- C. Class map configuration mode
- D. Policy map configuration mode
- E. None of the above

Answer: C

Explanation:

Router(config-cmap)#match ip dscp dscp [dscp ...] 1) Select up to eight DSCP values or names 2) All packets marked with one of the selected DSCP values are matched by this class map.

Question: 17

Which of the following statements would be the most appropriate when one considers Policy-Based Routing (PBR) for QoS?

- A. PBR can only choose a route other than what is in the routing table.
- B. PBR can change the route provided it first classifies and marks the packet.
- C. PBR can change the route and/or mark the packet using precedence.
- D. PBR can only set the precedence if configured to choose a route other than what is in the routing table.

Answer: C

Explanation:

The primary function of Policy-based Routing (PBR) is to bypass the destination-based forwarding functionality of routers by using a route map to make a forwarding decision based on other information. One additional feature of Policy Based Routing is the ability to modify IP packets by marking them with IP precedence or QoS group.

Question: 18

The exhibit low illustrates how a packet is sent. First to R1, after which R1 forwards it to R2, and then R3, etc. until it reaches its destination, PC2. R1 marks the packet with IP Precedence 3.



Which statement is valid?

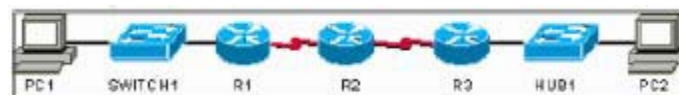
- A. When classifying packets at layer 3, only Layer 3 IP procedure marking can be used.

- B. R2 and R3 can perform QoS features that ignore the marked IP Precedence field in the packet.
- C. R2 and R3 can only perform QoS features based on the IP Precedence field, since the packet has already been marked.
- D. R3 can apply QoS features to the packet exclusively, but when the packet exits R1, the QoS features are lost.
- E. R2 can apply QoS features to the packet, and R3 can on ingress, but R3 cannot apply QoS features to the packet as it exits the Ethernet port on which PC2 resides.

Answer: B

Question: 19

The Exhibit below illustrates how an Ethernet frame is sent. PC1 will send an Ethernet frame, that is received and forwarded by Switch1. Switch1 forwards the frame to Router1. Router1 also forwards the packet to Router2 via serial link. Router2 will then forward the frame to Router3 via serial link, after which Router3 will forward the packet to the destination, PC2. Router3 and PC2 are connected to the same Ethernet hub, called Hub1.



Which networking devices can be used to examine the QoS field?

- A. All devices
- B. All routers
- C. The hub and switches
- D. All devices except the hub
- E. Switch1 only
- F. Switch1 and Router1

Answer: D

Question: 20

Which of the following statements regarding the capabilities of CB policing is valid? (Choose all that apply.)

- A. It cannot set ATM CLP bit.
- B. It only allows conform, exceed or violate action.
- C. It can be applied as either an input or output policer but not both.
- D. It can be applied to serial as well as ATM and Frame Relay interfaces.
- E. It can be applied as a cascading rate policy

F. It allows cascading rate policies, in order to allow for more granular rate limits.

Answer: B,D

Explanation:

B: is correct Class-based policing can mark packets with three different values depending on whether they conform, exceed or violate the policy.

Question: 21

Study the Exhibit below carefully: You are the network administrator at Companyxyz and have been instructed to apply policing and shaping functions to packets flowing into router1 over Ethernet, over a serial link to router2, and onto another Ethernet to the destination host.



Which of the following statements represents the most accurate description of Cisco's suggested designs for policing and shaping?

- A. Shaping is applied as output on router1's serial interface, and shaping is applied on input of router2's serial interface.
- B. Shaping is applied as output on router1's serial interface, and policing is applied on input of router2's Ethernet interface.
- C. Shaping is applied as output on router1's serial interface, and policing is applied on input of router2's serial interface.
- D. Shaping is applied as output on router1's serial interface, and shaping is applied on input of router2's Ethernet interface.
- E. None of the above.

Answer: C

Question: 22

Which of the following are shaping characteristics, but not policing characteristics? (Choose all that apply.)

- A. It forces TCP resends
- B. It is rate limiting with no buffering mechanism
- C. It can adapt to Frame Relay BECN and FECN
- D. It is most typically performed on egress

E. None of the above.

Answer: C, D

Question: 23

Which of the following statements regarding the capabilities of CAR is valid? (Choose all that apply.)

- A. It is capable of supporting both policing and shaping options.
- B. It allows a conform, exceed and violate action.
- C. It allows cascading rate policies, in order to allow for more granular rate limits.
- D. It can be used as both input and output policer.
- E. It can be applied to serial interfaces, as well as ATM and Frame Relay interfaces.

Answer: C, D, E

Question: 24

Shaping is the process whereby traffic flow is examined and rates are measured. What is done to packets during the shaping process when it exceeds a threshold bit rate?

- A. Packets are delayed (queued)
- B. Packets are discarded
- C. Packets that exceed a defined burst size as well, are delayed (queued)
- D. Packets that exceed a defined burst size as well, are discarded

Answer: C

Explanation:

Traffic that exceeds the BC value in time interval T will be queued.

Question: 25

Study the Exhibit below carefully:

```
Exhibit 5
map-class frame-relay slow_vcs
  frame-relay traffic-rate 64000 2000
map-class frame-relay fast_vcs
  frame-relay traffic-rate 8000 4000

interface serial 0
no ip address
encapsulation frame-relay
frame-relay traffic-shaping
int s 0.2
  ip addr 1.1.1.1 255.0.0.0
  frame-relay interface-dlci 102
  class fast_vcs
int s 0.3
  ip addr 2.2.2.2 255.0.0.0
  frame-relay interface-dlci 103
  frame-relay class slow_vcs

interface serial 1
no ip address
encapsulation frame-relay
frame-relay traffic-shaping
frame-relay class slow_vcs
int s 1.2
  ip addr 3.3.3.3 255.0.0.0
  frame-relay interface-dlci 202
int s 1.3
  ip addr 4.4.4.4 255.0.0.0
  frame-relay interface-dlci 203
```

Which interface or subinterface would be properly configured for 64 Kbps shaping?

- A. Interface S0
- B. Interface S1
- C. Subinterface S0.2
- D. Subinterface S0.3
- E. Subinterface S1.2

Answer: D

Question: 26

Which of the following are IPM features? (Choose all that apply)

- A. Identification and performance analysis
- B. Policy implementation right through an "IP reachable" network
- C. Path Per Hop Performance Analysis between two network devices
- D. Real-time historical graphical reports
- E. Proactive notification with an SNMP trap when response time exceeds predefined thresholds
- F. All of the above

Answer: A, C, D, E

Explanation:

IPM can analyze the performance between two endpoints in the network by comparing probes generated and sent from different points in the network. Instead of just knowing that response time is slow, IPM can help pinpoint the slow point in the network. IPM also supports some historical reporting, although SMS has more historical reporting features. More importantly, you can set thresholds with IPM so that when network performance degrades past a certain point, it will generate an SNMP trap.

Question: 27

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know which dial-peer subcommand correctly performs marking of VoIP packets. What will your response be?

- A. Precedence 5
- B. Ip precedence 5
- C. Set ip mark precedence 5
- D. Set ip precedence 5
- E. Mark ip precedence 5

Answer: B**Explanation:**

The syntax of B is correct. IP precedence is encoded into the three high-order bits of the ToS field in the IP header. It supports eight classes of which two are reserved and should not be used value and is usually used for the best-effort class. The set ip precedence command marks packets of a class with the specified precedence value.

Question: 28

Under which circumstances will you use marking in QoS enabled networks?

- A. When you want to indicate policing preferences based on the marked value.
- B. When you want to color a packet or frame so it is distinguishable from other packets or frames in QoS treatment.
- C. When you want to indicate whether PQ or CQ should be used.
- D. When you want to enable a router to disregard its locally configured QoS settings and provide alternate QoS implied by the marked value.

Answer: B**Question: 29**

Which of the following statements are true when you compare DSCP and IP Precedence to

each other? (Choose all that apply.)

- A. DSCP is backwards compatible with IP Precedence.
- B. DSCP cannot be easily mapped into QoS because of its expanded classification options.
- C. DSCP is more granular the IP Precedence, since more marking combinations are available.
- D. DSCP appears stubby when compared IP Precedence, since devices make use of DSCP as defined in RFC exclusively.
- E. DSCP is 6 bits long and IP Precedence is 3 bits long.
- F. DSCP is more restrictive than IP Precedence, since devices are only allowed to use DSCP as defined in RFCs.

Answer: A, C, E

Explanation:

A)DSCP is backward compatible with IP Precedence (Class Selector Code point, RFC 1812) but not with the ToS byte definition from RFC 791 ("DTR" bits)

Question: 30

Which MQC command would you use to perform marking properly?

- A. Precedence 5
- B. Ip precedence 5
- C. Set ip precedence 5
- D. Set ip mark precedence 5
- E. Mark ip precedence 5

Answer: C

Explanation:

IP precedence is encoded into the three high-order bits of the ToS field in the IP header. It supports eight classes of which two are reserved and should not be used for user-defined classes (IP precedence 6 and 7). IP precedence 0 is the default value and is usually used for the best-effort class. The set ip precedence command marks packets of a class with the specified precedence value.

Question: 31

Which of the following statements aptly describes a network well designed for QoS?

- A. Packets are classified at each router, based on as many detail as possible, typically using extended IP ACLs to match the packets for classification.
- B. Packets are classified at each router, based on socket address only, typically using extended IP ACLs to match the packets for classification.

- C. Packets are classified and marked, close to the edge of the network. The packets are treated differently based on this marking at the routers in the middle of the network.
- D. Packets are classified based on different parameters, but close to the edge of the network. The packets are automatically characterized based on flow at the routers.
- E. Packets are classified based on socket address, at the router closest to the source of the traffic. The packets are automatically characterized based on flow at the routers.

Answer: C

Explanation:

To achieve the same level of quality in both directions the packets going to and coming from the customer network must first be classified and marked. Classification and marking packets going to the customer network is a more difficult task because: 1) Classifying and marking must be performed on all edge routers. 2) Classifying and marking requires the identification of the customer network. Using PBR, CAR, CB-Policing or CB-Marking does not scale because it involves the use of access lists (this is especially difficult if customer networks are dynamically learned via BGP).

Question: 32

What are the advantages of making use of NBAR as part of a classification and marking design? (Choose all that apply.)

- A. It is able to match any TCP or UDP port number.
- B. It is able to match packets based on application layer information
- C. It has the ability to match QoS, Precedence, pr DSCP using NBAR.
- D. It has the ability to match packets that are difficult to match with access lists.
- E. All of the above.

Answer: B, D

Explanation:

Nbar can be used to look beyond layer 4 port numbers and inspect the actual payload. Also NBAR can be used to easily identify data which can be hard to configure access lists. DQOS course notes: NBAR can classify static port protocols. Although access control lists (ACL's) can also be used for this purpose, NBAR is easier to configure and can provide classification statistics that are not available when using ACL's.

Question: 33

Which two interface commands will enable precedence-based WRED when configuring WRED without using the MQC?

- A. Wred
- B. Random-detect prec-based

- C. Service-policy random-detect
- D. Random-detect
- E. Wred prec-based

Answer: B, D

Explanation:

Random-detect command: 1) Enables IP precedence based WRED 2) Default service profile is used 3) Non-distributed WRED cannot be combined with fancy queuing – FIFO queuing has to be used. 4) WRED can run distributed on VIP-based interfaces (dWRED) 5) dWRED can be combined with dWFQ Random-detect precedence command:

1) Changes RED profile for specified IP precedence value 2) Packet drop probability at maximum threshold is $1/\text{mark-prob}/\text{dominator}$ 3) Non-weighted RED is achieved by using the same RED profile for all precedence values.

Question: 34

Which IOS features will you advise the new Companyxyz trainee technician to use to combat the effects of global synchronization? (Choose all that apply.)

- A. GTS
- B. LLQ
- C. FRED
- D. WRED
- E. RSVP
- F. WFQ

Answer: C, D

Explanation:

Weighted RED (WRED) and Flow-Based WRED (FRED) are the two congestion-avoidance tools available in IOS.

Question: 35

The newly appointed Companyxyz trainee wants to know which Cisco IOS congestion avoidance features use IP Precedence to affect the probability of whether or not a packet will be dropped. What will your reply be? (Choose all that apply.)

- A. CAR
- B. RED
- C. FRED
- D. WRED
- E. NBAR

F. WFQ

Answer: C, D

Question: 36

The newly appointed Companyxyz trainee wants to know which Cisco IOS congestion avoidance features specifically penalizes flows (such as UDP) that does not respond to drops. What will your reply be?

- A. IP RTP priority
- B. RED
- C. WFQ
- D. FRED
- E. NBAR
- F. WRED

Not D: WRED is not sensitive to flows.

Answer: A, D

Question: 37

Which of the following show commands will list the settings and counters for WRED behavior when you configure WRED using MQC?

- A. Show wred
- B. Show policy
- C. Show interface s0 random
- D. Show wred interface policy
- E. Show policy wred
- F. Show wred policy

Answer: B

Question: 38

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know what global synchronization is. What will your reply be?

- A. It is the purposeful dropping of 1 packet per TCP connection, to quickfix congestion on all TCP connections.
- B. It is the process of selectively discarding TCP using packets, based on IP Precedence weighting, to reduce congestion.
- C. It is the side effect of dropped packets on many simultaneous TCP connections, which causes

network utilization to fluctuate between congestion state and an underutilized state.
D. It is typical of Internet performance that has been improved with advanced TCP features (i.e., Slow Start, Congestion Avoidance, and Fast Retransmit)

Answer: C

Explanation:

If the receiving router drops all traffic that exceeds the queue limit, as is done by default (with tail drop), many TCP sessions then simultaneously go into slow start. Consequently, traffic temporarily slows down to the extreme and then all flows slow-start again. This activity creates a condition called global synchronization.

Question: 39

What is the TCP measurement of the delay for a packet to get to the receive and then back to the send called?

- A. Window size
- B. Transit delay
- C. Transit window delay
- D. Round-trip time
- E. Propagation delay
- F. Serialization delay

Answer: D

Explanation:

Round-trip time equals a sum of all propagation, processing and queuing delay in the path. Propagation delay is fixed, processing and queuing delay are unpredictable in best-effort networks.

Question: 40

Which of the following is valid about Low Latency Queuing (LLQ) but invalid when considering IP RTP priority?

- A. It reserves and guarantees a configured amount of bandwidth.
- B. It can be used for both TCP and UDP traffic types.
- C. It is useful for RTP-based voice and video traffic.
- D. It can match a range of UDP port numbers and provide lower latency for that traffic.
- E. None of the above.

Answer: B

Question: 41

Which IOS queuing features will ensure a configured amount of bandwidth to a particular class of traffic?

- A. CAR
- B. CQ
- C. LLQ
- D. WFQ
- E. CBWFQ
- F. PQ

Answer: B, C, E

Explanation:

CQ provides specific percentage of bandwidth for each flow. LLQ and CBWFQ can guarantee that the flow with the biggest priority would never starve and the bandwidth would be guaranteed it.

Question: 42

Which subcommand will you advise the new Companyxyz trainee technician to use when configuring LLQ on a Frame Relay interface?

- A. Frame-relay ip rtp priority class-map
- B. Priority map-class
- C. Priority policy-map
- D. Frame-relay ip rtp priority interface
- E. Priority class-map

Answer: C

Explanation:

To give priority to a class of traffic belonging to a policy map, use the priority policy-map class configuration command. To remove a previously specified priority specified for a class, use the no form of this command. priority{bandwidth-kbps | percent percentage} [burst]
no priority {bandwidth-kbps | percent percentage} [burst]

Question: 43

Which IOS queuing mechanism allows you to place packets at the front of the queue when you have a mission critical TCP application that will only be operational with the lowest

possible latency?

- A. NBAR
- B. CAR
- C. LLQ
- D. WFQ
- E. CBWFQ
- F. IP RTP Priority

Answer: C

Explanation:

The mission critical TCP application can be placed to the low-latency queue. Like PQ, the LLQ scheduler always checks the low-latency queue first, and takes a packet from that queue. If there are no packets in the low-latency queue, the normal, unpublished scheduler logic applies to the other non-low-latency queue queues, giving them their guaranteed bandwidth.

Question: 44

Study the Exhibit below carefully: What serial interface makes use of LLQ?

```
class-map fred
match ip dscp af41

policy-map barney
class fred
bandwidth 30

class-map wilma
match ip dscp af41

policy-map betty
class fred
bandwidth 30
class wilma
priority 100

int s 0/0
ip addr 10.1.1.1 255.255.255.0

int s 0/1
ip address 10.2.2.2 255.255.255.0
service-policy output barney

int s 0/2
ip address 10.3.3.3 255.255.255.0
service-policy output fred

int s 0/3
ip address 10.4.4.4 255.255.255.0
service-policy output wilma

int s 0/4
ip address 10.5.5.5 255.255.255.0
service-policy output betty
```

- A. Serial 0/0
- B. Serial 0/1
- C. Serial 0/2

D. Serial 0/4

Answer: D

Question: 45

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know which IOS queuing features use a strict priority queue. What will your reply be? (Choose all that apply.)

- A. CQ
- B. LLQ
- C. CAR
- D. PQ
- E. NBAR
- F. WFQ

Answer: B,D

Explanation:

Both LLQ and PQ use a strict priority queue. PQ (priority queuing) is fully based on strict priorities and LLQ uses strict priority only for its low latency queue.

Question: 46

What are the functions of RSVP in an Admission Control environment? (Choose all that apply.)

- A. RSVP must determine if the application requesting resources is eligible.
- B. RSVP must guarantee bandwidth and delay.
- C. The requesting RSVP station must ensure end-to-end RSVP availability.
- D. RSVP must determine the availability and adequacy of resources for the reservation.

Answer: B,D

Explanation:

RSVP is used for applications where bandwidth and delay related guarantees are necessary. Typical application which use RSVP are: -Voice over IP (Cisco phones, Microsoft NetMeeting, ...) -MPLS Traffic Engineering. RSVP also must provide resources reservation.

Question: 47

Which of the factors mentioned below is important to keep in mind when selecting Call Admission Control (CAC) methods to be deployed in your network?

- A. Type of PBX
- B. CAR
- C. E.164 standards
- D. Network topology
- E. QoS mechanisms deployed

Answer: D

Question: 48

You are the network administrator at Companyxyz. The newly appointed Companyxyz trainee wants to know which of the following is a "Measurement Based" Call Admission Control (CAC) function. What will your reply be?

- A. RSVP
- B. Advanced Busy Out Monitor (AVBO)
- C. Service Assurance Agent (SAA)
- D. Max. Connections
- E. Voice Bandwidth for Frame Relay

Answer: B

Explanation:

Advanced Busy-Out Monitor (AVBO) is measurement based CAC feature. Probe measurements are better than a configured "impairment factor"; if value is higher, the entire trunk is placed in busy-out.

Question: 49

Which of the following represents a "Local Configuration" Call Admission Control (CAC) method?

- A. RSVP
- B. PSTN Fallback
- C. Max. Connections
- D. Locations Construct
- E. Advanced Busy Out Monitor (AVBO)

Answer: C

Explanation:

Max-connections is Local based CAC tool. A configured number of maximum connections on the dial peer used for the call has been exceeded.

Question: 50

You are the network technician at Companyxyz. The newly appointed Companyxyz trainee wants to know which feature can be used to police traffic according to the Cisco QoS Framework. What will your reply be?

- A. PQ
- B. LLQ
- C. CAR
- D. CQ
- E. NBAR
- F. WRED

Answer: C

Explanation:

CAR provides policing and marking.

Question: 51

How many possible meaningful values are defined in the DSCP in a Differentiated Services environment?

- A. 3
- B. 8
- C. 16
- D. 32
- E. 64
- F. 128

Answer: E

Explanation:

DSCP supports more classes (64) than IP precedence (8)

Question: 52

Which of the following features will allow the marking of packets according to the Cisco

QoS Framework? (Choose all that apply.)

- A. MQC
- B. CQ
- C. PQ
- D. CAR
- E. WRED

Answer: A, D**Explanation:**

The Modular Quality of Service Command Line Interface (MQC) was introduced to allow any supported classification to be used with any QoS mechanism. Some mechanisms have the capability to mark packets based on classification and/or metering (e.g. CAR, class-based marking, etc.)

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