
Number of questions in this set is 490.

These are extremely effective for preparation , since they are at the same level of difficulty. Difficulty levels of these questions range from "easy" to "very hard" just as you would face in the exam.

These questions are sorted according to the EXAM OBJECTIVES. That way you can easily find out which areas your weaknesses lie in.

ACRC (640-403)

HOTQUESTIONS' ACRC QUESTIONS' SET

A few EXAM TIPS:

1. Passing score 790
2. You can't skip questions for later. That is, you have to answer each questions when presented before you can move on to the next one.
3. There are some questions that require you to type in the answer (commands) and you can't shorten the commands (at least that's what they say during instructions)

There are about 11 such questions

That is why, we have left quite a few of the IOS questions with just the answer (not multiple-choice). That is what you would have to come up with during the exam.

Note: Some questions below come with notes and explanations. For example: the route summarization questions come with explanations.

Sorted by ACRC 640-403 Exam Objectives

Total of 71 Objectives

OBJ. 1. DESCRIBE the key requirements of a scalable internetwork

Q. Choose the requirements for a scalable internetwork among the following (Choose all that apply)

- a. available
- b. efficient
- c. fast
- d. mesh topology

ans: A,B

Q. Choose the requirements for a scalable internetwork among the following (Choose all that apply)

- a. asymmetric bandwidth
- b. adaptable
- c. inexpensive
- d. secure

ans: B,D

OBJ. 2. SELECT A CISCO IOS FEATURE AS A SOLUTION FOR A GIVEN INTERNETWORK REQUIREMENT

Q. Which cisco IOS feature(s) help provide adaptability to an internetwork ? Choose all that apply.

- a. access lists
- b. snapshot routing
- c. EIGRP proprietary protocol
- d. redistribution

ans: B,D

Q. Which cisco IOS feature(s) help provide responsiveness to an internetwork ? Choose all that apply.

- a. custom queueing
- b. tunneling
- c. load balancing
- d. access-lists

ans: A

OBJ. 3. DESCRIBE causes of network congestion

Q. Which of the following is NOT a cause of network congestion ?

- a. distance-vector routing protocols
- b. broadcast storms
- c. bridging in situations where switching should be implemented
- d. snapshot routing

ans: D

Q. 2 examples of chatty routed protocols.

- a. NETBUI
- b. TCP/IP
- c. IPX
- d. Appletalk

ans: C,D

OBJ. 4. LIST solutions for controlling network congestion

Q. Potential solutions for network congestion (choose all that apply).

- a. route summarization
- b. incremental updates
- c. snapshot routing
- d. distance-vector routing protocols
- e. autonomous switching

ans: A,B,C,E

Q. You want keep the ARP cache entries in the cache for 10 minutes instead of the default value. Which command will do that ?

- a. router# arp timeout 60
- b. router(config)# arp timeout 60
- c. router(config)# arp timeout 1
- d. router(config)# arp keep 1
- e. router(config)# arp holdtime 1

ans: B

Q. How many kinds of network packet buffers are there ?

- a. 2
- b. 3
- c. 4
- d. 5
- e. 6

ans: E

Q. Which of the follwoing are names of network packet buffers. Choose 3.

- a. tiny
- b. small
- c. medium
- d. big
- e. huge

ans: B,D,E

NOTE: Names of network packet buffers:
small, middle, big, very big, large, huge.

Q. What does a filter list do ?

- a. filters regular user traffic
- b. filters traffic based on TCP ports
- c. controls the passing of routing protocol broadcasts and advertisements
- d. controls dialup access
- e. filters BPDU packets

ans: C

Q. What command would you use see info about buffers ?

- a. router# buffer info
- b. router# buffer
- c. router# show buffer
- d. router(config)# show buffer
- e. router(config)# buffers

ans: C

Q. Which of the following commands configures switching on cisco routers ? (Choose 3)

- a. ip route-cache
- b. ip switch s0 s1
- c. ip cache-flow
- d. ip cef
- e. ip flow-export

ans: A,D,E

Q. Which logical interface can be used by SNMP to monitor a router.

- a. null
- b. snmp0
- c. loopback
- d. dialer
- e. tunnel

ans: C

NOTE: loopback is equivalent of loopback (127.0.0.1) on unix

Q. You want to find out how many SNMP packets have been sent out or have been received. Which command ?
(Type out the command)

ans: show snmp

Q. How does IOS allocate buffers for packets ?

- a. it allocates the smallest one available
- b. it allocates the smallest one the packet would fit in.
- c. it allocates the biggest one available
- d. it allocates one of the sizes that is most free
- e. it allocates randomly

ans: B

Q. You do "sh buffer" and for on of the buffers you get this
Large buffers, 5024 bytes (total 10, permanent 10):

What does "5024 bytes" mean ?

- a. size of the buffer
- b. number of total bytes available in "large" size
- c. size of the largest packet in the "large" buffer
- d. size of the smallest packet in the "large" buffer

ans: A

Q. You do "sh buffer" and for on of the buffers you get this
Large buffers, 5024 bytes (total 10, permanent 10):

What does "permanent 10" mean ?

- a. number of permanent overhead bytes in the large buffer
- b. number of currently used large buffers
- c. number of permanent large buffers in the pool
- d. number of currently unused large buffers in the pool
- e. number of allowed maximum used large buffers in the pool

ans: C

NOTE: Permanent buffers are allocated at boot time and are never removed from the pool.

Q. You do "sh buffer" and you get this:

Big buffers, 1524 bytes (total 90, permanent 90):
30 in free list (5 min, 300 max allowed)
87900 hits, 0 misses, 0 trims, 0 created
0 failures (0 no memory)

What does "5 min" mean ?

- a. If number of free Big Buffers fell below 5, IOS will create more Big buffers
- b. Number of big buffers at boot time
- c. IOS can create upto 5 big buffers when there is none in the pool
- d. The lowest number of big buffers used since the last reboot
- e. The minimum number of processes that can occupy big buffers at any given time

ans: A

NOTE: Size of each Big buffer is 1524 bytes

There were 90 Big buffers at boot time.

Right now 60 (90-30) are being used

IOS can create upto 300 Big buffers if need be.

Big buffers have allocated 87900 times.

Never was a time when a big buffer was needed, but there was none in the free list

(if that happened, more big buffers would have been created)

0 trims means that no big buffer was ever destroyed because they are no longer being used

0 buffers were created because of a miss

0 times a buffer allocation failed as a result of not having a free buffer and not

creating another buffer to accommodate the request.

0 failures resulting from not having enough memory.

Q. Which command would reset interface e0 hardware ?

- a. router# reset interface e0
- b. router# reload interface e0
- c. router# clear interface e0
- d. router(config)# clear interface e0
- e. router(config)# reload interface e0

ans: C

Q. Which command would reset all interface hardware ?

- a. router# reset interface all
- b. router# reload interface
- c. router# clear interface
- d. router(config)# clear interface all
- e. router(config)# reload interface

ans: C

OBJ. 5. CONFIGURE IP standard access lists

Q. Make an access list that blocks all ip traffic from 128.252.144.0 network and allows the rest. Choose all that apply.

- a. access-list 102 deny 128.252.144.0 0.0.0.255
- b. access-list 2 deny 128.252.144.0 0.0.0.255
- c. access-list 102 permit any
- d. access-list 2 permit any
- e. access-list 2 deny 128.252.144.0
- f. access-list 2 deny ip 128.252.144.0 0.0.0.255

ans: B,D

Q. Which statement should be at the top of the access list statements ?

- a. One that matches the least hosts
- b. One that matches the most hosts

- c. One that denies most traffic
- d. one that permits most traffic
- e. One that works on class C networks

ans: B

NOTE: Saves CPU cycles

Q. True/False: Cisco router may reorder access list statements in certain situations.

- a. True
- b. False

ans: True

Q. How many access-lists can you have ?

- a. 1 per port
- b. 1 per port per protocol
- c. 1 per port per direction
- d. 1 per port per direction per protocol
- e. 2 per port per direction per protocol

ans: D

OBJ. 6. LIMIT VIRTUAL TERMINAL ACCESS

Q. What kind of access-lists can be applied to virtual terminals ?

- a. standard ip lists
- b. extended ip lists
- c. standard ipx lists
- d. extended ipx lists

ans: A,B

Q. You already made an access list(#3) for vty access. You want to apply it to vty 0 through 2 Which commands would you run ?

- a. router(config)# line vty 0 1 2
- b. router(config)# line vty 0 to 2
- c. router(config)# line vty 0 2
- d. router(config-vty)# access-group 3 in
- e. router(config-vty)# access-class 3 in

ans: C,E

Q. Want to add a telnet password to your router. Which of the following commands would you run ? Choose all that apply.

- a. router(config)# line vty 0 4
- b. router(config-vty)# password
- c. router(config-vty)# passwd
- d. router(config-vty)# password XXXXXX
- e. router(config-vty)# login

ans: A,D,E

Q. You want to forcefully kill one of the suspended sessions ? How ? Assume that the session number of the want you want to kill is 2.

- a. router# disconnect

- b. router# disconnect 2
- c. router# kill 2
- d. router(config)# disconnect
- e. router(config)# disconnect 2

ans: B

Q. When you type (in the privileged mode) vty 0 4, what do the 0 and 4 represent ?

- a. VTY 0 and 4
- b. VTY 0 to 3
- c. VTY 0 to 4
- d. VTY 0 or 4

ans: C

Q. You just resumed a session with a remote router. You forgot if you were in the middle of typing a command. You would like to erase the command (if any) and start over. What to do ?

- a. Cntrl-A
- b. Cntrl-E
- c. Cntrl-U
- d. Cntrl-X
- e. Cntrl-Z

ans: C

Q. Which version of IP has built-in mechanism that can check whether a packet's source is really what it says it is (i.e. is it spoofing or not ?) ?

- a. none
- b. IPv4
- c. IPv6
- d. both IPv4 and IPv6

ans: C

Q. You do "sh sessions" and you see that you have 3 sessions open (1--> router1, 2 ---> router2, 3 --> router3). You want to get back to session 2. How ? Choose 2.

- a. 2
- b. rejoin 2
- c. login 2
- d. enter 2
- e. resume 2

ans: A,E

Q. You have 3 suspended telnet sessions. You hit return. Which sessions would you get back to ?

- a. the very first session
- b. the session with the longest time login
- c. whichever session has "*" in the output of "sh sessions" command
- d. whichever session has the lowest session number

ans: C

Q. You want to allow a remote user "johndoe" on a remote host with the IP address 128.252.144.1 to execute commands on router1 using the rsh or rcp protocol. You also want "johndoe" to be able to

execute commands in the privileged EXEC mode. Which command would you run on your router.
(Type in the command)

ans: ip rcmd remote-host router1 128.252.144.1 johndoe enable

Q. You just resumed a session with a remote router. You were in the middle of typing a command. It was long command and you don't want to start over. But, you can't see how much the command you had typed. What to do ?

- a. Cntrl-A
- b. Cntrl-E
- c. Cntrl-R
- d. Cntrl-X
- e. Cntrl-Z

ans: C

NOTE: Press Cntrl-R to redisplay the command

Q. You were connected to a remote router. You were typing a command. You then suspended the session by typing ctrl-shift-6-x. Now resumed the session. What would happen to the command that you were typing.

- a. you will start over the command
- b. it would still be there , but you won't see it.
- c. it would still be there and you will see it
- d. it would still be there and you will only see the last 6 characters of the command

ans: B

Q. DMZ = ?

- a. Data Manipulation Zone
- b. Data Mining Zone
- c. Duplex Multiplier Zone
- d. De-militarized Zone

ans: D (The part of the network that lies outside the firewall, but inside the border router. Mostly used for www,email etc. services)

Q. What is a bastion host ?

- a. a host in Fast Ethernet LAN
- b. a host in a De-militarized Zone
- c. a host in FDDI ring
- d. a host between a DCE and a DTE

ans: B

NOTE:

The De-militarized Zone is The part of the network that lies outside the firewall, but inside the border router. Mostly used for www,email etc. services.

Q. Command to enable password encryption.

- a. router# service password-encryption
- b. router(config)# service password-encryption
- c. router(config)# encrypt
- d. router(config)# encrypt password

ans: B

Q. Command to turn off password-encryption

- a. router# no service password-encryption
- b. router(config)# no service password-encryption
- c. router(config)# encrypt null
- d. router(config)# no encrypt password

ans: B

Q. You ran "no service password-encryption" and yet the password is encrypted. Why ?

- a. you have get out of the previledged mode and get back in
- b. you have to logout of the router and log back in
- c. you have to reboot the router
- d. the passwords will remain encrypted until you enter them again.

ans: D

Q. Deafult time-out values for vty sessions ?

- a. 30 seconds
- b. 60 secinds
- c. 5 minutes
- d. 10 minutes

ans: D

Q. You would like to change the default time-out value for vty sessions to 5 minutes and 10 seconds. How ?

- a. line vty timeout 5 10
- b. exec-timeout 5 10
- c. line vty timeout 310
- b. exec-timeout 310

ans: B (in aux/con/vty config mode)

Q. You want to do away with the automatic time out on vty sessions altogether. How ?

- a. exec-timeout 0 0
- b. line vty timeout 0
- c. no line vty timeout
- d. exec-timeout 0

ans: A (in aux/con/vty config mode)

Q. You do "sh user" and you see that someone is logged in via a vty session who shouldn't be logged in. You want to log him off. How do you do that ?

- a. issue the command : clear vty 1
- b. issue the command : disconnect line remote
- c. find out the vty number of the session and issue the command "clear line #"
- d. issue the command : disconnect vty remote

ans: C

Q. You suspended 3 telnet sessions. You forgot in what order you went in. How do you find out ?

- a. show telnets
- b. show vty

- c. show users
- d. show sessions
- e. show sessions order

ans: D

Q. Easiest way to find out the status of the line devices ?

- a. show telnets
- b. show vty
- c. show users
- d. show sessions
- e. show line

ans: E

Q. How do you know which line devices are in use ?

- a. run "show vty" and look for "u" at the beginning of each line
- b. run "show vty" and look for "-" at the beginning of each line
- c. run "show line" and look for "-" at the beginning of each line
- d. run "show line" and look for "*" at the beginning of each line
- e. run "show users" and look for "*" at the beginning of each line

ans: D

Q. How do you find out how many times a line device has been used ?

- a. run "show vty" and look in "permit" column
- b. run "show line" and look in "permit" column
- c. run "show line" and look in "uses" column
- d. run "show users" and look in "uses" column
- e. run "show users" and look in "permit" column

ans: C

Q. Which command would you run to find out about line 2 device ?

- a. show line 2
- b. show users line 2
- c. show vty 1
- d. show vty 2
- e. show vty 2 detail

ans: A

Q. You are afraid of "denial-of-service" attacks. Hence, you want to disable ip directed broadcast. How and in which mode ?

- a. router(config)# no ip directed-broadcast [access-list#]
- b. router(config-if)# no ip directed-broadcast [access-list#]
- c. router(config)# no ip broadcast [access-list#]
- d. router(config-if)# no ip broadcast [access-list#]

ans: B

OBJ. 7. CONFIGURE IP EXTENDED ACCESS LISTS

Q. Construct an access-list statement that denies packets from 128.252.0.0/16 network destined for 128.252.144.0/24 .

- a. access-list 101 deny ip 128.252.0.0 0.0.255.255 128.252.144.0 0.0.0.255
- b. access-list 10 deny ip 128.252.0.0 0.0.255.255 128.252.144.0 0.0.0.255

- c. access-list 101 deny 128.252.0.0 0.0.255.255 128.252.144.0 0.0.0.255
- d. access-list 101 deny ip 128.252.0.0 0.0.255.255 128.252.144.0 0.255.255.255

ans: A

Q. Construct an access-list statement that permits any http traffic from 128.0.0.0/8.

(Type the list. Not multiple choice)

ans: access-list 101 permit tcp 128.0.0.0 0.255.255.255 any eq 80

Q. Construct an access-list statement that denies UDP packets from any host to destination 128.252.0.0/16 that maps to SNMP port.

- a. access-list 10 permit udp any 128.252.0.0 0.0.255.255 eq 161
- b. access-list 101 permit udp any 128.252.0.0 0.0.255.255 eq 69
- c. access-list 101 permit udp any host 128.252.0.0 0.0.255.255 eq 161
- d. access-list 10 permit udp any host 128.252.0.0 0.0.255.255 eq 161
- e. access-list 101 permit udp any 128.252.0.0 0.0.255.255 eq 161

ans: E

Q. Construct an access-list statement that denies ICMP Echo Reply (ICMP type-code 0) packets from host 128.252.144.84 to any network.

(Type the statement; NOT a multiple choice question)

ans: access-list 101 deny icmp host 128.252.144.84 any 0

OBJ. 8. VERIFY ACCES LIST OPERATION

Q. Command to enable accounting for IP access-lists violations and display the accounting data

- a. ip accounting
- b. debug ip packets
- c. ip accounting access-violations
- d. show ip accounting

ans: C

Q. Command to see access lists applied to virtual terminals

- a. show access-lists
- b. show line
- c. show int
- d. show protocol ip
- e. debug access-lists

ans: B

Q. Command to display the ip traffic that matches access list 5.

- a. show ip traffic
- b. show protocol ip
- c. debug ip traffic 5
- d. debug ip packet 5
- e. debug access-list 5

ans: D

Q. Command To see what access lists are defined.

- a. show protocol
- b. show access-lists
- c. show access-lists defined
- d. debug acces-lists
- e. access-lists

ans: B

Q. Command to see which access-lists have been applied to which interfaces.

- a. show interface
- b. show interface access
- c. show access-lists
- d. show access

ans: A

OBJ. 9. CONFIGURE AN ALTERNATIVE TO USING ACCESS LISTS

Q. What is the null interface ?

- a. a term that represents "all physical interfaces"
- b. a term that represents "any logical interface"
- c. a logical interface where packets are dropped without any processing
- d. a dialer interface, not assigned to any physical interface
- e. any interface that is "down"

ans: C

NOTE: Equivalent to /dev/null in unix. Packet that do not go anywhere can be dropped in the null interface

Q. How do you create a null logical interface ?

- a. It is automatically created.
- b. By referencing it
- c. using the command "no shutdown interface null"
- d. using the command "enable null"

ans: A

Q. How do you drop packets without wasting any CPU cycles ?

- a. direct them to line devices
- b. direct them to the null interface
- c. direct them to any dialer interface
- d. direct them to any tunnel interface
- e. direct them to any backup interface

ans: B

OBJ. 10. CONFIGURE AN IP HELPER ADDRESS TO MANAGE BROADCASTS

Q. Give an example where the use of a ip helper address would be useful :

- a. when RIP is reaching its 16 HOP limit
- b. when the WINS server is on a different network than its client PCs

- c. when an appletalk server is overwhelmed with requests
- d. when a secondary DNS server is on a different network than the clients and the primary DNS server is on the same network as the clients

ans: B

Q. What is an IP helper address ?

- a. a host that will stop all broadcasts
- b. a host that will forward all broadcast on a network to a server on a different network
- c. a host that will forward all broadcast on a network to a host in the same network
- d. a host that will forward all multicast packets on a network to another network
- e. a host that will forward all multicast packets on a network to a server on a different network.

ans: B

NOTE: This includes UDP packets

Q. You want your router (128.252.144.254) to propagate broadcast in the 128.252.144.0 network to a server 128.252.120.1. Which command ?

- a. router# ip helper-address 128.252.120.1
- b. router(config)# ip helper-address 128.252.120.1
- c. router(config)# helper-address 128.252.120.1
- d. router(config)# helper-address ip 128.252.120.1
- e. router(config)# ip helper-address 128.252.120.1 0.255.255.255

ans: B

Q. You want your router to propagate all broadcasts through interface e0. Which command (if possible at all) would do that ?

- a. not possible
- b. router#ip helper-address e0
- c. router(config)# ip helper-address e0
- d. router(config)# helper-address e0
- e. router(config)# helper-address int e0

ans: C

Q. When you define ip-helper address, which of the following protocols are forwarded ?

Choose 3.

- a. BOOTP
- b. DNS
- c. RIP
- d. GNS
- e. TACAS

ans: A,B,E

Q. You have configured a helper-address on your router. However, you want your router

to pass broadcasts of protocols other than the default ones. Which command ? (Type in the command. Not a multiple-choice question)

ans: ip forward-protocol

OBJ. 11. CONFIGURE IPX/SPX TRAFFIC MANAGEMENT ISSUES

Q. Default SAP update interval = ?

- a. 30 sec
- b. 60 sec
- c. 90 seconds
- d. 120 seconds
- e. 300 seconds

ans: B

Q. If you have multiple IPX encapsulations on your LAN, what has to be true of the following for the network to work smoothly ?

- a. IPX hosts per subnet must not be over 253
- b. Number of IPX hosts with the same type of encapsulations must not exceed 253
- c. IPX hosts with the same encapsulations have to have the same network number
- d. You have to configure each host to run both encapsulations
- e. Hosts with different encapsulations have to be segmented with a switch

ans: C

Q. You are adding a static SAP entry. In the field for "socket", you want to enter "all". What value would you use ?

- a. -1
- b. 0
- c. 1
- d. 9
- e. 99

ans: B

Q. You want your router to respond to SAP requests with each server name evenly. Which command ?
(Type the statement; NOT a multiple choice question)

ans: ipx gns-round-robin

Q. You want to see the internal IPX network numbers of the Netware servers in your network.

Which command would you type on your router ?

- a. show ipx servers address
- b. show arp
- c. show netware
- d. show netware address
- e. show ipx servers

ans: E

Q. The node address of Novell servers is always _____ ?

- a. 0000.0000.0000
- b. 0000.0000.0001
- c. 0000.0000.1000
- d. 0000.1000.0000
- e. 1000.0000.0000

ans: B

Q. Cisco routers' default encapsulation for IPX = ?

- a. arpa
- b. novell-ether
- c. sap
- d. snap

ans: B

Q. How many IPX encapsulations can you have in a LAN ?

- a. upto 2
- b. upto 4
- c. upto 7
- d. upto 15
- e. upto 31

ans: B

Q. What is necessary for a router to run NLSP ?

- a. nothing
- b. it has to have at least 2 interfaces with IPX running
- c. it has to have at least 1 token ring interface
- d. it has to configured with an "internal" network number
- e. it has to have a ip helper address configured

ans: D

Q. SAP advertises what ?

- a. files
- b. printers
- c. directory info
- d. browse masters
- e. services

ans: E

Q. NLSP works on which layer ?

- a. data link
- b. network
- c. transport
- d. session

ans: B

Q. NLSP = ?

- a. Netware Link Services Protocol
- b. Netware Layer Service Protocol
- c. Novell Link Services Protocol
- d. Novell Layer Service Protocol

ans: C

NOTE: Developed to overcome IPX RIP and SAP shortcomings

Q. What would be the IPX node address of serial interface on a cisco router ?

- a. The MAC address of the highest numbered LAN interface + 1 (HEX)
- b. The MAC address of the highest numbered LAN interface
- c. The MAC address of the highest numbered active LAN interface
- d. The MAC address of the lowest numbered LAN interface
- e. The MAC address of the lowest numbered active LAN interface

ans: E

Q. How many services can each SAP packet advertise ?

- a. 1
- b. 2
- c. 4
- d. 7
- e. 8

ans: D

NOTE: each service needs 66 bytes and each SAP packet is 576 byte long

Q. When can a workstation issue a SAP broadcast ?

- a. only when it is issuing a GNS request.
- b. only when it is responding to a GNS request.
- c. When it is issuing a GNS OR responding to one.
- d. at boot time and when it is responding to a GNS request.
- e. when it has at least 2 interfaces running IPX

ans: A

Q. Which command shows the routing table for IPX ?

- a. show ipx route
- b. show route ipx
- c. show routing
- d. show routing ipx
- e. show arp

ans: A

OBJ. 12. FILTER IPX TRAFFIC USING IPX ACCESS LISTS

Q. What would be rough equivalent of TCP ports in IPX/SPX ?

- a. IPX service numbers
- b. IPX node numbers
- c. IPX protocol numbers
- d. IPX hostid's
- e. IPX sequence numbers

ans: C

Q. What do the following IPX port numbers represent ?

-1, 1, 4

- a. Any, RIP, NCP
- b. Netbios, RIP, SAP
- c. SPX, Netbios, Any
- d. NCP, Netbios, SPX
- e. Any, RIP SAP

ans: E

Q. What port number would use for SPX, NCP and Netbios in an IPX access lists.

- a. 5, 17, 21
- b. 5, 17, 20

- c. 2, 9, 19
- d. 5, 12, 13
- e. 2, 9, 13

ans: B

Q. When designing an IPX access list, how do you specify "any" protocol ?

- a. -1
- b. 0
- c. 9
- d. 99
- e. 255

ans: A

Q. You are making an extended IPX access list. How would you insert in the field for "Port Number" if you want packets to be examined for IPX sockets ?

- a. -1
- b. 0
- c. 9
- d. 99
- e. 255

ans: B

NOTE: 0 stands for undefined

Q. Which of the following has a log option ?

- a. standard ipx access-list
- b. extended ipx access-list
- c. both standard and extended ipx access-lists
- d. neither of standard and extended ipx access-lists

ans: B

Q. What do these IPX socket numbers represent ?

0 2 451

- a. all, NCP, cping
- b. netbios, NCP, SPX
- c. SPX, netbios, all
- d. all, cping, NCP
- e. cping, netbios, all

ans: D

NOTE: cping stands for Cisco IPX ping

Q. What numbers represent the following IPX sockets ?

SAP, EIGRP, NLSP

452 - SAP
858E - Enhanced IGRP
9001 - NLSP

Q. Construct an access-list statement that denies any traffic from network 100 to network 200.
(Type the statement; NOT a multiple choice question)

ans: access-list 800 deny 100 200

Q. Construct an access-list statement that denies any traffic from network 100 to any network.

(Type the statement; NOT a multiple choice question)

ans: access-list 800 deny 100

Q. You are making an IPX standard access list. How would you represent "any host" ?

- a. -1
- b. 0
- c. 1
- d. 9
- e. 255

ans: A

Q. You are making an extended IPX access list. True or False: You can use keywords instead of numbers in the field for "Protocol Type" .

- a. True
- b. False

ans: True

NOTE: Example: SPX instead of 5

Q. Construct an Extended IPX access list that denies traffic that matches the following criteria:

```
protocol_type: SPX
source network: 100
source socket: 17
destination network: 200
destination socket: 17
```

(Type the statement; NOT a multiple choice question)

ans: access-list 900 deny spx 100 17 200 17
OR
access-list 900 deny 5 100 17 200 17

Q. You are making an extended IPX access list. What keyword would you use to indicate that you care nothing about the source network or the destination network ?

- a. each
- b. every
- c. all
- d. any
- e. zero

ans: C

Q. You are making an extended IPX access list. What keyword would you use to indicate that you care nothing about the sockets (source or destination) ?

- a. each
- b. every
- c. all
- d. any

e. zero

ans: C

Q. You have an access-list numbered 905. You want to undefine that list. What command ?

- a. no shutdown access-list 905
- b. no access-list 905
- c. clear access-list 905
- d. undefine access-list 905

ans: B

Q. You have an access-list numbered 905. You no longer have any interfaces that use that list. But you think that you may use it later. Can you keep the list and not use it ?

- a. Yes
- b. No

ans: A

Q. When you are applying a SAP filter to an interface, you want the router to filter only certain advertisements from a certain router. Which command ? The access list number is 1000.

- a. router# ipx router-sap-filter 1000
- b. router(config)# ipx router-sap-filter 1000
- c. router(config-if)# ipx router-sap-filter 1000
- d. router(config-if)# ipx access-group 1000
- e. router(config)# ipx access-group 1000

ans: C

Q. You have made a extended IPX list. You want to see what statements make up the list. What command would you type. The list number is 905.

- a. show access-list 905
- b. show ipx access-list 905
- c. show interface 905
- d. show 905 access-list
- e. show ipx list 905

ans: B

Q. Make a list that denies all SAP advertisements from server 1.0000.0000.2345, but allows everything else. Choose how many statements are required.

- a. access-list 1000 deny 1.0000.0000.2345
- b. access-list 900 deny 1.0000.0000.2345
- c. access-list 1000 deny any 1.0000.0000.2345
- d. access-list permit -1
- e. access-list permit all

ans: A,D

Q. You already made a list (#1000) that is meant to control how the router responds to client GNS requests. How do you apply that to an interface ?

- a. router1(config)# ipx output-gns-filter 1000
- b. router1(config)# ipx input-gns-filter 1000

- c. router1(config-if)# ipx output-gns-filter 1000
- d. router1(config-if)# ipx access-group 1000
- e. router1(config-if)# ipx input-gns-filter 1000

ans: router1(config-if)# C

Q. Can you specify a mask that covers a range of IPX networks in a standard or extended IPX access lists ?

- a. Neither
- b. In standard IPX access list only
- c. In extended IPX access list only
- d. In both standard and extended IPX access lists

Ans: C

NOTE. The mask in standard IPX access list covers only the node portion

Q. If a sap filter denying a particular service is invoked, do you need to configure a GNS filter as well?

- a. Yes
- b. No

Ans: B

Q. What range of access-list numbers would you use for SAP filters and for GNS filters ?

- a. 900-999 for both
- b. 900-999 and 1000-1099 respectively
- c. 1000-1099 and 900-999 respectively
- d. 1000-1099 for both
- e. 1000-1099 and 1100-1199 respectively

ans: D

OBJ. 13. MANAGE IPX/SPX TRAFFIC OVER WAN CONNECTION

Q. What is IPXWAN ?

- a. A protocol that runs on serial interfaces that connect 2 routers
- b. A protocol that runs on atm interfaces that connect 2 routers
- c. A protocol that runs DCE interfaces that connect 2 routers
- d. A protocol that runs on serial interfaces that connect more than 2 routers
- e. A protocol that runs on FDDI interfaces that connect 2 routers

ans: A

NOTE: IPXWAN = Internetwork Packet Exchange for wide-area networks

A protocol runs on serial interfaces that connect 2 routers.

Helps to find out about link delay, throughput, routing protocol, and link cost.

The First 2 sets information can be used by routing protocols.

Q. If you are running IPXWAN on your router, what is used as the identifier of your router ?

- a. routers' hostname
- b. lowest of router's interface IPs
- d. highest of router's interface IPX numbers
- d. lowest of router's interface IPX numbers
- e. router's "internal" network number

ans: E

Q. What is a tunnel interface used for ?

- a. to store dialer profiles
- b. To forward traffic of a protocol to a network that does not support that protocol
- c. to drop packet without wasting CPU cycles
- d. to support VLANs
- e. to multiple ISDN B channels

ans: B

Q. 2 ways to pass ipx traffic over a WAN interface

- a. ipxwan
- b. use VLANs
- c. use frame-relay LMI
- d. tunnel over IP
- e. use same model of highend cisco routers

ans: A,D

Q. How do you set the internal network number of a router ?

- a. It is automatically set
- b. It is dynamically set
- c. router(config)# ipx internal-network-number number
- d. router(config-if)# ipx internal-network-number number
- e. router(config)# ipx network-number number

ans: C

Q. What is the internal network number of a shared WAN link ?

- a. same as the internal network number of the slave router
- b. same as the internal network number of the master router
- c. lower of the internal network numbers of the 2 routers
- c. higher of the internal network numbers of the 2 routers
- e. 0

ans: B

Q. How do you set the interval at which an interface will advertise its sap table over a WAN link to 5 minutes ?

- a. router(config-if)# ipx sap-interval 5
- b. router(config-if)# ipx sap-interval 300
- c. router(config)# ipx sap-interval 300
- d. router(config)# ipx sap-interval 5
- e. router(config-if)# ipx sapint 5

ans: A

Q. You want to tunnel ipx over ip. Which interface do you use ?

- a. dialer 0
- b. null
- c. tunnel 0
- d. ipxwan 0
- e. serial 0

ans: C

Q. You want to see what ipx access-lists have ben defined on your router.
Which comamnd ?
(Type the statement; NOT a multiple choice question)

ans: show ipx access-lists

Q. You want to see which ipx access-lists have been applied to interface e0. Which command ?

- a. show ipx access-lists
- b. show ipx access-lists applied
- c. show ipx access-lists e0
- d. shoe ipx interface e0
- e. show access-lists ipx e0

ans: D

OBJ. 15. DESCRIBE THE NEED FOR QUEUEING IN A LARGE NETWORK

Q. You want to find out what queueing strategy is in use for serial0.
which command ?

- a. sh queue serial1
- b. sh queueing serial1
- c. sh int serial1
- d. sh line serial1

ans: C

NOTE: (look for the line starting with "queueing startegy")

Q. How many custom queues can you define ?

- a. 4
- b. 8
- c. 12
- d. 16
- e. 32

ans: D

Q. You have a ISDN BRI line to your ISP. What kind of queueing would
be good for you ?

- a. weighted-fair queue
- b. priority queue
- c. custom queue
- d. none

ans: D.

NOTE: (You should not use queues on line with bandwidth less than
that of T1 line)

Q. Which queueing is best suited for low-bandwidth links.

- a. weighted-fair queue
- b. priority queue
- c. custom queue
- d. none

ans: B

OBJ. 16. DESCRIBE WEIGHTED FAIR QUEUEING OPERATION

Q. Which queueing is enabled by default on links 2Mbps or less ?

- a. weighted-fair queue
- b. priority queue
- c. custom queue
- d. none

ans: A

Q. What kind of traffic gets priority in weighted fair queueing ?
(choose 2)

- a. low volume conversation traffic
- b. high volume conversation traffic
- c. interactive traffic
- d. http traffic
- e. file transfer traffic

ans: A,C

OBJ. 17. CONFIGURE PRIORITY QUEUEING

Q. You have already defined a priority-list (1). How do you apply it to interface serial0 ?

- d. router(config)# priority-group 1 s0
- e. router(config)# priority-group s0 1
- c. router(config-if)# priority-group 1
- d. router(config-if)# access-group 1
- e. router(config-if)# access-group 1 [in/out]

ans: C

Q. You want to make a priority queue list (1) that puts any ipx traffic to "high" priority. Which statement would define such traffic and priority.

- a. access-list 1 protocol ipx high
- b. access-list 1 protocol ipx 1
- c. priority-list 1 protocol ipx high
- d. priority-list 1 ipx high
- e. priority-list 1 ipx 1

ans: C

Q. How do you tell your router any traffic that does not match any of the definitions in priority list 1 is of "normal" priority ?
(Type the statement; NOT a multiple choice question)

ans: priority-list 1 default normal

OBJ. 18. CONFIGURE CUSTOM QUEUEING

Q. You have already defined custom queue list 1. How do you apply it to int s0 ?

(Type the statement; NOT a multiple choice question)

ans: router(config-if)# custom-queue-list 1

Q. You have configured custom queuing for your router. You have not

configured byte-counts. You are getting hit constantly by traffic that matches queue 1.

When will the traffic that matches queue 2 be processed ?

- a. after a default of 30 sec
- b. after a default of 60 sec
- c. when the "huge" buffers fill up
- d. never

ans: D

Note: Without byte-counts set, custom queueing becomes nearly the same as priority queueing.

OBJ. 19. LIST the key information routers need to route data

Q. If you are using CIDR what info would router need to route data (besides the IP address) ?

- a. the route path
- b. bandwidth
- c. AS number
- d. network length suffix

ans: D

Q. Why can't some routing protocols deal with VLSM ?

- a. VLSM was not around at the time of the protocol's inception
- b. VLSM was not to be supported
- c. VLSM gets very complicated when it comes to ISP-based internet
- d. VLSM forces a larger routing table

ans: A

Q. Which of the following protocols can not deal with VLSM ?
Choose all that apply

- a. RIP
- b. IGRP
- c. EIGRP
- d. OSPF
- e. BGP
- f. RIP2

ans:A,B

Q. Which protocols do not carry mask info with IP address ?
Choose all that apply

- a. RIP
- b. IGRP
- c. EIGRP
- d. OSPF
- e. BGP
- f. RIP2

ans: A,B

Q. Discontiguous addressing = ?

- a. 2 subnets belonging to different classful networks separated by a third network address

- b. 2 subnets belonging to different classful networks separated by a network that belongs to one of two classfull networks
- c. 2 subnets belonging to the same classful networks separated by a different network address
- d. 2 subnets belonging to the same classful networks separated by a network address that belongs to the same classful network

ans: C

OBJ. 20. COMPARE distance vector and link-state protocol operation

Q. Which of the following are true ?

- a. Distance-Vector routing protocol advertises the full table
- b. Distance-Vector routing protocol advertises to neighbors only
- c. Link-State routing protocols advertises updates only
- d. Link-State routing protocols advertises to the whole area

ans: A,C

Q. How do you solve the bandwidth and resource usage problem with Link-State Routing Protocols. Choose 2.

- a. use broadcast for routing update
- b. dampen periodic updates
- c. use targeted multicast and do not flood updates
- d. increase frequency of routing updates

ans: B,C

Q. Which of the following are true ?

- a. Distance-Vector routing protocols are prone to routing loops
- b. Distance-Vector routing protocols are prone to having inconsistent views of network
- c. Link-State routing protocols are prone to routing loops
- d. Link-State routing protocols are prone to having inconsistent view of network

ans: A,B

Q. Which of the following is true ?

- a. Distance-Vector routing protocols use more computing power than Link-State routing protocols
- b. Distance-Vector routing protocols use about same computing power than Link-State routing protocols
- c. Distance-Vector routing protocols use less computing power than Link-State routing protocols
- d. How much computing power Distance-Vector and Link-State routing protocols use depend on the bandwidth of the interfaces

ans: C

OBJ. 21. GIVEN AN IP ADDRESS, USE VLSMs TO EXTEND THE USE OF THE IP ADDRESS

NOTE: This objective basically points to subnetting questions.
Please refer to CCNA question set for subnetting formulas and subnetting questions.

Q. You are using classful protocols like RIP and IGRP. When (if at all)

would you use "ip classless" command ?

- a. never
- b. only if you are connected to the internet
- c. if you have contiguous subnets
- d. if you have discontinuous subnets

ans: D

OBJ. 22. GIVEN A NETWORK PLAN THAT INCLUDES IP ADDRESSING, EXPLAIN IF ROUTE SUMMARIZATION IS OR IS NOT POSSIBLE.

Q. 2 protocols that can not do route summarization.

- a. RIP
- b. IGRP
- c. EIGRP
- d. OSPF
- e. BGP
- f. RIP2

ans: A,B

Q. Given the following networks, is route summarization possible ?
If so, what is the summarized network ?

128.252.224.0/20
128.252.240.0/20

- a. Yes ; 128.252.128.0/17
- b. Yes ; 128.252.160.0/18
- c. Yes ; 128.252.160.0/19
- d. Yes ; 128.252.192.0/18
- e. No

ans: D

Explanation:

Step 1: Write Out in binary :

(| represents the network/host boundary)

1000 0000. 1111 1100. 1101		0000. 0000 0000
1000 0000. 1111 1100. 1110		0000. 0000 0000
1000 0000. 1111 1100. 1111		0000. 0000 0000

If the higher bits are the same, the network addresses are contiguous and route summarization is possible.
In this case, they are (1000 0000. 1111 1100. 11)

Step 2: Take the network parts and find the part that's common in all (1000 0000. 1111 1100. 11).
This yields the network address (128.252.192.0).
Prefix is just the number of bits (= 18)

Q. Command to turn off route summarization in EIGRP
(Type the statement; NOT a multiple choice question)

ans: no auto-summary

Q. 3 conditions for route summarization :

- a. ip addresses must be contiguous
- b. ip addresses must be discontinuous

- c. routing tables must support classless routing
- d. routing protocol must be BGP
- e. routing protocols must be able to handle prefix length and subnet info with the ip address

ans: A,C,E

Note: In order for networks to be contiguous, higher bits have to be the same.

Q. Is route summarization possible in the following scenario ?

128.252.144.128/27
128.252.144.160/27
128.252.144.224/27

- a. Yes ; 128.252.144.128/24
- b. Yes ; 128.252.144.128/25
- c. Yes ; 128.252.144.192/19
- d. Yes ; 128.252.144.192/18
- e. No

ans: B

Explanation:

Step 1. Write out in binary:

1000 0000. 1111 1100. 1001 0000. 100|0 0000
1000 0000. 1111 1100. 1001 0000. 101|0 0000
1000 0000. 1111 1100. 1001 0000. 111|0 0000

If the higher bits are the same, the network addresses are contiguous and route summarization is possible.
In this case, they are (1000 0000. 1111 1100. 1001 0000. 1)

Step 2.

Take the network parts and find the part that's common in all (1000 0000. 1111 1100. 1001 0000.1).
This yields the network address (128.252.144.128).
Prefix is just the number of bits (= 25)

OBJ. 23. DEFINE private addressing and determine when it can be used

Q. What IP network addresses are set aside for class A ?

- a. 1.0.0.0 (mask 255.0.0.0)
- b. 10.0.0.0 (mask 255.0.0.0)
- c. 10.0.0.0 (mask 255.255.0.0)
- d. 100.0.0.0 (mask 255.0.0.0)
- e. 100.0.0.0 (mask 255.255.0.0)

ans: B

Q. You have been using private addressing for your enterprise network. Now you want to connect to internet. How can you translate between your private addresses and your addresses provided by your ISP ?

Choose all that apply.

- a. Proxy server
- b. Dialer Profiles
- c. NAT

- d. Tunnel Interface
- e. EasyIP feature

ans: Proxy server, NAT

Q. What IP network addresses are set aside for class B ?

- a. 128.0.0.0 (mask 255.255.0.0)
- b. 128.252.0.0 (mask 255.255.0.0)
- c. 172.16.0.0 (mask 255.240.0.0)
- d. 172.16.0.0 (mask 255.255.0.0)
- e. 172.240.0.0 (mask 255.255.0.0)

ans: C

Q. What IP network addresses are set aside for class C ?

- a. 172.16.0.0 (mask 255.240.0.0)
- b. 172.16.0.0 (mask 255.255.0.0)
- c. 196.168.0.0 (mask 255.255.0.0)
- d. 198.168.0.0 (mask 255.255.0.0)
- e. 198.168.0.0 (mask 255.255.255.0)

ans: D

OBJ. 24. DEFINE NETWORK ADDRESS TRANSLATION AND DETERMINE WHEN IT CAN BE USED

Q. T/F: NAT is a Cisco Proprietary Software.

- a. True
- b. False

ans: A

Q. What version of cisco IOS has NAT ?

- a. 10.0
- b. 10.5
- c. 11.0
- d. 11.2
- e. 11.8

ans: D

Q. Command to define a pool named "outwego" as the address 128.252.144.39 to 128.252.144.53 (mask 255.255.255.0) :

- a. router(config)#ip nat pool outwego 128.252.144.39 128.252.144.53 netmask 255.255.255.0
- b. router(config)#ip nat outwego 128.252.144.39 128.252.144.53 netmask 255.255.255.0
- c. router(config)#ip nat pool outwego 128.252.144.39 128.252.144.53 255.255.255.0
- d. router(config)#nat outwego 128.252.144.39 128.252.144.53 netmask 255.255.255.0

ans: A

Q. Command to specify the current interface as the "outside" interface:
(Type the statement; NOT a multiple choice question)

ans: router(config-if)#ip nat outside

Q. How many interfaces can be configured as the "outside" interface (NAT) ?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

ans: A

OBJ. 25. EXPLAIN why OSPF is better than RIP in a large internetwork

Q. Which of the following reasons explain why OSPF is better than RIP in a large internetwork ? (Choose 3)

- a. OSPF is more scalable than RIP
- b. OSPF uses less CPU power than RIP does
- c. OSPF is easier to configure than RIP
- d. OSPF produces faster convergence than RIP
- e. OSPF handles larger networks than RIP can

ans: A,D,E

Q. Which of the following reasons explain why OSPF is better than RIP in a large internetwork ? (Choose 3)

- a. OSPF uses less memory power than RIP
- b. OSPF produces less network traffic and traffic is multicast
- c. OSPF provides VLSM support
- d. OSPF is not a proprietary protocol
- e. OSPF provides better path determination

ans: B,C,E

OBJ. 26. EXPLAIN HOW OSPF DISCOVERS, CHOOSES, AND MAINTAINS ROUTES

Q. States OSPF routers can be in ? (Choose 5)

- a. down
- b. administratively down
- c. init
- d. twoway
- e. threeway
- f. exstart
- g. exchange

ans: A,C,D,F,G

Q. What priority value dictates that the router can not be DR/BDR ?

- a. -1
- b. 0
- c. 1
- d. 99
- e. 255

ans: B

Q. ABR = ?

- a. Area Border Router
- b. Area Backbone Router
- c. Area Backup Router
- d. Admin Backbone Router
- e. Admin Backup Router

f. Admin Border Router

ans: A

Q. Master/Slave relationship is created at which state ?

- a. down
- b. init
- c. twoway
- d. exstart
- e. exchange

ans: D

Q. Exchange of DDPs happen in which state ?

- a. down
- b. init
- c. twoway
- d. exstart
- e. exchange

ans: E

NOTE: DDP = (Database Description packets)

Q. Which is the correct order ?

- a. LSR --> LSU ---> LSack
- b. LSU --> LSR ---> LSack
- c. LSU --> LSack ---> LSR
- d. LSR --> LSack ---> LSU
- e. LSack --> LSR ---> LSU

ans: A

Q. How long will a router wait before doing SPF calculation after a link state change ?

- a. 30 sec
- b. 60 sec
- c. determined by SPF holdtime
- d. determined by OSPF recalc parameter
- e. determined by the cost of the link that has changed

ans: C

OBJ. 27. CONFIGURE OSPF FOR PROPER OPERATION

Q. Command to specify a router ID ?

- a. ip ospf router id number
- b. ip ospf router number
- c. ip ospf routerid number
- d. ospf router id number
- e. int loopback number

ans: E

Q. Which modifier do you use when you are redistributing from other routing protocols to OSPF ?

- a. router id
- b. bandwidth

- c. subnets
- d. cost
- e. reliability
- f. load

ans: C

Q. Command to change a router priority to 5

- a. priority 5
- b. ospf priority 5
- c. ip ospf priority 5
- d. ip ospf router priority 5

ans: C

Q. In OSPF, What is the default "cost" ?

- a. 10
- b. 56
- c. 100
- d. $10^6/\text{bandwidth}$
- e. $10^8/\text{bandwidth}$

ans: E

Q. If I have an OSPF network with only one area, what must be the area number ?

- a. -1
- b. 0
- c. 1
- d. 16
- e. It can be anything

ans: B

OBJ. 28. VERIFY OSPF OPERATION (SINGLE-AREA)

Q. You are configuring OSPF and the ip address which is being used as the router id is deleted. What must be done ?
Choose 2.

- a. Router must be reloaded or
- b. Force a SPF calculation or
- c. OSPF deconfigured and reconfigured or
- d. all interfaces must be reset or
- e. a multicst route update must be sent out

ans: A,C

Q. Which command will display ospf information including router id ?

- a. show ospf router
- b. show ip ospf local
- c. show ip ospf
- d. show ip ospf neighbor
- e. show ip ospf detail

ans: C

Q. Command to see the neighbor table (OSPF) ?
(Type the statement; NOT a multiple choice question)

ans: show ip ospf neighbor

Q. You suspect that somehow OSPF routes are not in your's IP routing table. What command would run to see if OSPF routers are in your IP routing table.

- a. show routing
- b. show ospf route
- c. show ip ospf route
- d. show ip route
- e. show route ospf

ans: D

NOTE: Look for the CODE O in the front of the route.

Q. You want to find out the router id, priority and area of neighbor 128.252.144.254 . Which comamnd ?

- a. show ospf neighbor 128.252.144.254
- b. ip ospf neighbor 128.252.144.254
- c. show neighbor 128.252.144.254
- d. sh ip ospf neighbor 128.252.144.254

ans: D

Q. You want to find out which OSPF process and OSPF area e0 belongs to. Which command ?

- a. show ospf interface e0
- b. show interface e0 ospf
- c. show ip ospf e0
- d. show ip ospf interface e0
- e. show ip ospf process

ans: D

Q. You want to watch as your router's interfaces go through different OSPF states with its neighbours, exchange messages, elect DR/BDR. Which command ?

- a. show ip ospf
- b. show ospf detail
- c. show ip ospf detail
- d. debug ip ospf adj
- e. debug ospf ip

ans: D

Q. You want to know which interfaces are talking OSPF. Which command would you run ?

- a. show ip ospf interface
- b. show ospf interfaces
- c. show ip ospf process
- d. show ip ospf area
- e. show ip ospf interfaces

ans: E

OBJ. 29. DESCRIBE THE ISSUES WITH INTERCONNECTION MULTIPLE AREAS AND HOW OSPF ADDRESSES EACH

Q. When (if at all) can OSPF be configured to allow arbitrary

connection between areas ?

- a. not allowed
- b. at least one area has a non-zero id
- c. both areas have a non-zero ids
- d. if the areas are contiguous
- e. if the areas are discontinuous

ans: A

Q. A link in area 2 goes down. Who has to recalculate shortest paths to all destinations.

- a. ABRs in area 2
- b. ABRs in area 0 and 2
- c. Each router in area 0
- d. Each router in area 2
- e. Each router in all areas

ans: D

Q. Each interface can belong to at most _____ area(s).

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

ans: A

Q. T/False: each area must connect to area 0 directly.

- a. True
- b. False

ans: A

OBJ. 30. EXPLAIN THE DIFFERENCES BETWEEN THE POSSIBLE TYPES OF AREAS, ROUTERS, AND LSAs

Q. OSPF: What is a characteristic of all internal routers ?

- a. same routing tables
- b. same neighbor database
- c. identical link-state database
- d. routing update timing synchronized

ans: C

Q. What is the difference between stub area and totally stub area ?

- a. Stub area knows about routes in its own area
and routes in areas connected via backbone & ABRs
Totally stub area knows about routes in its own area only
- b. Stub area knows about routes in its own area only
Totally stub area knows about routes in its own area
and routes in areas connected via backbone & ABRs
- c. Stub area knows about only its default route
Totally stub area knows about routes in its own area
- d. Stub area knows about routes in its own area
Totally stub area knows about its default route only

ans: A

Q. Who issues type 5 LSAs (OSPF) ?

- a. ABR
- b. ASBR
- c. routers in stub area
- d. routers in totally stub area
- e. routers that neither ABR nor ASBR

ans: B

Note: Type 5 LSAs contain Autonomous System Entries which tells about external routes.

Q. In a stub area type ____ LSAs are not flooded.

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

ans: E

NOTE: (AS external LSAs)

OBJ. 31. CONFIGURE A MULTI AREA OSPF NETWORK

Q. You run 'sh ip route'. You see a letter/digit/character combination code at the beginning of each route . What do they mean ?

E1 and IA

- a. OSPF external type 1 and OSPF inter-area respectively
- b. OSPF NSSA external type 1 and OSPF intra-area respectively
- c. OSPF external type 1 and OSPF intra-area respectively
- d. OSPF NSSA external type 1 and OSPF inter-area respectively

ans: A

Q. ASBR must reside in a _____ OSPF area.

- a. stub
- b. area 0
- c. area 1
- d. totally stub
- e. non-stub

ans: E

Q. ASBR must run at least _____ ? (Choose all that apply)

- a. RIP
- b. IGRP
- c. EIGRP
- d. OSPF
- e. at least 1 another routing protocol (RIP, IGRP, EIGRP etc.)

ans: D,E

Q. In OSPF, all areas have to be connected to backbone area. If you can't do that, how can you get around it ?

- a. use a tunnel
- b. use a ppp link
- c. use a loopback interface
- d. use a virtual-link

ans: D

NOTE: (through a transit area)

Q. Transit areas can not be _____ area ?

- a. a backbone
- b. a stub
- c. a totally stub
- d. a partitioned
- e. 0

ans: B

Q. What is the difference between area 0 and backbone area ?

- a. none
- b. backbone area includes stub areas
- c. backbone area includes ABR
- d. backbone area includes ASBR
- e. backbone area can include totally-stub areas in it

ans: A

Q. When can non-backbone areas exchange packets directly ?

- a. when they have router ids 1 or 2
- b. when one of them is a stub area
- c. when one of them is a totally-stub area
- d. when both of them are stub areas
- e. never

ans: E

Q. An area in which a link failure causes one part of the area to become isolated from another is called _____ area.

- a. backbone
- b. transit
- c. partitioned
- d. stub
- e. totally-stub

ans: C

Q. You want to find out which areas your router knows about and each of area's number of routers, number of networks. Which command ?

- a. sh ospf database database-summary
- b. sh ip ospf database summary
- c. sh ospf database database-summary
- d. sh ip ospf database-summary
- e. sh ip ospf neighbor

ans: C

Q. Network Summary LSAs are originated by _____ ?

- a. internal routers
- b. designated routers

- c. backup designated routers
- d. area border routers
- e. router in stub areas

ans: D

Q. Command to list all of the router LSAs in a database. Which command ?

- a. show ip ospf database router
- b. show ospf database router
- c. show ip ospf database
- d. show ip ospf database lsa
- e. show ip ospf database router local

ans: A

Q. Command to observe a network LSA :

- a. show ospf database network
- b. show ip ospf network
- c. show ip ospf database
- d. show ip ospf database network
- e. show ip ospf database network lsa

ans: D

Q. Command to list router 128.252.144.254's LSA:
(Type the statement; NOT a multiple choice question)

ans: show ip ospf database router 128.252.144.254

Q. You run "sh ip route". Which codes indicate OSPF external routes ?

- a. O
- b. N1
- c. N1/N2
- d. OE
- e. O E1 / O E2

ans: E

Q. Autonomous System External LSAs are originated by _____ ?

- a. ABRs
- b. ASBR
- c. Internal routers
- d. External routers
- e. BDR

ans: B

Q. You sun 'sh ip route". You see a letter/digit/character combination code at the beginning of each route . What do they mean ?

N1 and O

- a. OSPF external type 1 and OSPF inter-area respectively
- b. OSPF NSSA external type 1 and OSPF respectively
- c. OSPF external type 1 and OSPF respectively
- d. OSPF external type 1 and OSPF intra-area respectively
- e. OSPF NSSA external type 1 and OSPF inter-area respectively

ans: B

Q. You want to find out how many LSAs in your router's OSPF

database are external ? Which command ?

- a. show ip ospf database
- b. show ip ospf database summary
- c. show ip ospf database database-summary
- d. show ospf database database-summary
- e. show ospf database summary

ans: C

Q. You run "sh ip route" . Which code indicates routes in the same AS but in a different area.

- a. O E1
- b. O E2
- c. O IA
- d. N1
- e. N2

ans: C

OBJ. 32. VERIFY OSPF OPERATION (MULTI-AREA)

Q. Command to see routes to ABRs and ASBRs:
(Type the statement; NOT a multiple choice question)

ans: sh ip ospf border-routers

Q. You want to find out which transit area and interface your router is using for virtual link (OSPF). Which command ?

- a. sh ip ospf transit
- b. sh ip ospf partitioned
- c. sh ip ospf virtual-link
- d. sh ospf veirtual-link
- e. sh ospf tarnsit

ans: C

Q. Your router is running 3 OSPF processes. You only want to find out about OSPF process 2. Which command ?

- a. sh ospf 2
- b. sh ospf proc 2
- c. sh ip ospf proc 2
- d. sh ip ospf id 2
- e. sh ip ospf 2

ans: E

Q. You want to know about router 128.252.144.254's LSA in area 3 of OSPF process 2. Which command ?

- a. sh ip ospf 2 3 database router 128.252.144.254
- b. sh ip ospf 3 2 database router 128.252.144.254
- c. sh ip ospf 3 2 database 128.252.144.254
- d. sh ip ospf database 2 3 128.252.144.254
- e. sh ip ospf 2 3 LSA 128.252.144.254

ans: A

OBJ. 33. DESCRIBE ENHANCED IGRP FEATURES AND OPERATION

Q. Which algorithm helps induce rapid convergence in EIGRP.

- a. SPF
- b. DUAL
- c. Link-state Routing Algorithm
- d. OSPF
- e. Distance-Vector Routing Algorithm

ans: B

NOTE: DUAL = Diffusing Update Algorithm

Q. EIGRP routing updates are _____ ?

- a. flooded on the network
- b. sent to neighbors only
- c. sent to a central router
- d. sent at regular intervals even if there is no change

ans: B

Q. Advertised Distance = ? (in EIGRP)

- a. distance between next hop and destination
- b. between a central router and destination
- c. between local router and next hop
- d. between local router and destination

ans: A

Q. Which Layer 3 protocols does EIGRP support ?
Choose All That Apply.

- a. netbui
- b. ip
- c. ipx
- d. appletalk
- e. ppp

ans: B,C,D

NOTE: PPP is not a layer 3 protocol

Q. Distance between local router and next hop is called ?

- a. administrative distance
- b. advertised distance
- c. cost metric
- d. local distance
- e. feasible distance

ans: E

Q. In EIGRP: How many successors can you have ?

- a. 0
- b. 1 and only 1
- c. at most 2
- d. more than 1

ans: D

Q. NBMA = ?

- a. Nonbroadcast Multiple Access
- b. Nonbroadcast Media Access
- c. NO Broadcast Multiple Access
- d. Non-Broadband Media Access

ans: A

Q. Default Interval for EIGRP hello packets in NBMA networks ?

- a. 30 sec
- b. 60 sec
- c. 90 sec
- d. 120 sec
- e. 180 sec

ans: B

Q. You have distcontiguous networks. What should you do if you are using EIGRP ?

- a. disable automatic route summarization
- b. enable automatic route summarization
- c. disable incremental updates
- d. increase the frequency of incremental updates
- e. decrease the frequency of incremental updates

ans: A

Q. Types of EIGRP routes : Choose all that apply.

- a. default
- b. local
- c. internal
- d. external
- e. summary

ans: C,D,E

Q. You run 'sh ip route'. You see the following letter/digit/character combination

code at the beginning of each route. What do they mean ?

D and EX

- a. RIP, OSPF EXTERNAL
- b. IGRP, OSPF EXTERNAL
- c. IGRP, BGP EXTERNAL
- d. BGP, EIGRP EXTERNAL
- e. EIGRP, EIGRP EXTERNAL

ans: E

Q. Which command (in IGRP) can you use to specify how close paths (in cost) have to be before load balancing can occur ?

- a. load
- b. traffic-share min
- c. path-balance
- d. variance
- e. balance-factor

ans: D

Q. Which command will tell the router to use only the lowest cost path and not do any load balancing (IGRP) ?

(Type the statement; NOT a multiple choice question)

ans: traffic-share min

OBJ. 34. CONFIGURE ENHANCED IGRP

Q. EIGRP is proprietary.

- a. True
- b. False

ans: True

Q. You have a 100BaseT ethernet interface. You want to set the bandwidth value for eigrp. Which command ?

- a. router(config-if)# bandwidth 100
- b. router(config-if)# bandwidth 100000
- c. router(config-if)# bandwidth 100000000
- d. router(config)# bandwidth fastethernet1/0 100
- e. router(config-if)# speed 100000

ans: B

Q. Command to disable automatic route summarization (EIGRP) ?

(Type the statement; NOT a multiple choice question)

ans: no auto-summary

Q. You are running EIGRP. However, you do not want the s0 interface to participate

in EIGRP in EIGRP protocol traffic. Which command ?

- a. router(config-router)# no eigrp s0
- b. router(config-router)# eigrp passive-interface s0
- c. router(config-router)# passive-interface s0
- d. router(config-if)# passive-interface
- e. router(config-if)# eigrp passive-interface

ans: C

Q. EIGRP: On interface e0 you want to summarize route to network 128.252.144.0/24. Your AS# is 20. Which command ?

(Type the statement; NOT a multiple choice question)

ans: router(config-if)# ip summary-address eigrp 20 128.252.144.0 255.255.255.0

Q. You want ipx to be routed by eigrp. You have already enabled ipx routing. What's next ? your AS# is 20.

- a. ipx router eigrp 20
- b. you don't have to do anything else
- c. eigrp router ipx 20
- d. eigrp as 20
- e. eigrp ipx router 20

ans: A

Q. EIGRP: You want to allow SAP updates on e0 only if there is a change in SAP table. Your AS# is 20. Which command would you use ?

(Type the statement; NOT a multiple choice question)

ans: ipx sap-incremental eigrp 20

Q. Why would you set the bandwidth of an interface ?

- a. Some protocols (e.g. EIGRP) use bandwidths to determine the best route
- b. Otherwise, keepalives will be misread
- c. Mandatory in RIP
- d. Mandatory in IGRP
- e. routing updates will not be synchronized otherwise

ans: A

Q. Each AS (autonomous system) is assigned _____ bit address ?

- a. 4
- b. 8
- c. 16
- d. 32

ans: C

Q. Default bandwidth value for Fast Serial Interface on Cisco routers = ?

- a. 64 (kbps)
- b. 128 (kbps)
- c. 256 (kbps)
- d. 512 (kbps)
- e. 1544 (kbps)

ans: E

OBJ. 35. VERIFY ENHANCED IGRP OPERATION

Q. Which command would you use to monitor eigrp packet exchanges between your router and one of the your neighbor (128.252.144.254) of eigrp process 12.

- a. sh ip eigrp neighbor 128.252.144.254
- b. sh ip eigrp neighbor 12 128.252.144.254
- c. sh eigrp neighbor 12 128.252.144.254
- d. sh ip eigrp 12 128.252.144.254
- e. sh ip eigrp neighbor 128.252.144.254 12

ans: B

Q. You run "sh ip eigrp topology". You see a "P" in front of an entry. What does it mean ?

- a. next hop
- b. passive state
- c. paired state
- d. primary link
- e. redistributed route

ans: B

Q. All you want to do is monitor eigrp neighbor events (e.g. neighbor going down, coming up etc.). You do not want to monitor packet level info. Which command would you issue ?

- a. debug eigrp neighbors
- b. show eigrp neighbors

- c. show ip eigrp topology
- d. debug eigrp packets
- e. show ip eigrp neighbors

ans: A

Q. You want to know the best route to 128.252.144.0 and its feasible distance ?
How ?

- a. show eigrp distance 128.252.144.0
- b. show eigrp distance and look for the line containing 128.252.144.0
- c. show ip eigrp distance feasible
- d. show ip eigrp topology distances
- e. show ip eigrp topology and look for the line containing 128.252.144.0

ans: E

Q. Command to monitor eigrp packets:

- a. sh ip eigrp packets
- b. sh eigrp packets
- c. debug eigrp neighbors
- d. debug eigrp packets
- e. debug ip eigrp packets

ans: D

Q. You do "sh ip route" and you see the following:

```
D EX 172.25.0.0/16 [170/2221056] via 172.20.15.5, 00:41:48, serial0
```

What does the "D EX" mean ?

- a. eigrp external route
- b. IGRP route
- c. default external route
- d. eigrp internal route
- e. redistributed OSPF route

ans: A

Q. You want to find out how long each of the eigrp neighbors has been up. Which command should you run ?
(Type the statement; NOT a multiple choice question)

ans: sh ip eigrp neighbors

OBJ. 36. SELECT AND CONFIGURE THE DIFFERENT WAYS TO CONTROL ROUTE UPDATE TRAFFIC

Q. Name 4 ways to control update traffic:

- a. use passive interfaces
- b. use default routes
- c. define bandwidth for interfaces
- d. use static routes
- e. use routing update access-lists
- f. increase route update frequency
- g. use redistribution

ans: A,B,D,E

Q. Define a default ipx route via node 00.80.1A.2B.3C.4D, network 200.

- a. route ipx default 200.00801A2B3C4D
- b. ipx route default 200.00801A2B3C4D
- c. ipx route statis 200.00801A2B3C4D
- d. ipx default-network 200.00801A2B3C4D
- e. route ipx default 200.00801A2B3C4D

ans: B

Q. You are running RIP on your router. What command would stop RIP updates from going out from interafce e2.

- a. router(config-router)# passive-interafce e2
- b. router(config-router)# no router rip e2
- c. router(config-router)# no router rip int e2
- d. router(config-if)# no rip
- e. router(config-if)# no rip update

ans: A

Q. You want all ip packets to go to network 128.252.144.0 by default. Which comamnd ?

(Type the statement; NOT a multiple choice question)

ans: router(config)# ip default-network 128.252.144.0

Q. What is a floating static route ?

- a. dynamically learned route made static
- b. route that has come off redistribution made statis
- c. static route redistributed into more than one routing protocols
- d. a static route that can be overridden by a dynamically learned route

ans: D

Q. Write a statement to dictate a static route to 128.252.144/24 via 128.252.5.254 .

- a. ip route 128.252.144.0 255.255.255.0 128.252.5.254
- b. route ip 128.252.144.0 255.255.255.0 128.252.5.254
- c. static ip 128.252.144.0 255.255.255.0 128.252.5.254
- c. ip static 128.252.144.0 255.255.255.0 128.252.5.254

ans: A

Q. You want to redistribute static route into OSPF. What command would you use under the "router ospf" section ?

(Type the statement; NOT a multiple choice question)

ans: router(config-router)# redistribute static

Q. What does the following command do ?

router(config-if)#ipx advertise-default-route-only 100

- a. advertise ipx routes to network 100 only
- b. advertises only the default RIP route via network 100
- c. advertises default routes of all protocols via network 100
- d. use the route to network 100 as the default route

ans: B

Note: to advertise all knows RIP routes out the interface, use
no ipx advertise-default-route-only 100

Q. You want to redistribute RIP routes into OSPF. What command would you

use under the "router ospf" section if you want RIP routes to have a cost of 20.

(Type the statement; NOT a multiple choice question)

ans: router(config-router)# redistribute rip metric 20

Q. If you do not specify an administrative distance when you are issuing static routes, what will this static route's administrative distance be ?

- a. 0
- b. 1
- c. 10
- d. 20
- e. 100

ans: B

Note: default administrative distance for static routes

Q. You have already defined an access-list to control incoming route update as access-list number 10. How do you apply that list in incoming route updates on e0.

- a. router(config-router)#distribute-list 10 in e0
- b. router(config-router)#access-group 10 in e0
- c. router(config-router)#distribute-list 10 e0
- d. router(config-router)#filter 10 in e0
- e. router(config-router)#distribute-list 10 e0 in

ans: A

Q. You have not defined a default network for IP. You have not issued ip classless commadn. There is no route in the routing table for class B network 128.252.0.0. If your router receives a packet destined for 128.252.0.0, what will the router do ?

- a. hold it for 90 seconds for a route to be advertised
- b. forward it to any subnetwork that belongs to 128.252.0.0
- c. drop it.
- d. hold it till the next routing update and then drop it if the situation remains the same

ans: C

Q. You have already defined access-list 10 that would control your outgoing routing updates. How do you apply this list to outgoing route updates to AS 311 ?

- a. router(config-router)#distribute-list 10 out 311
- b. router(config-router)#access-group 10 out 311
- c. router(config-router)#distribute-list 10 311
- d. router(config-router)#filter 10 out 311
- e. router(config-router)#distribute-list 10 311 out

ans: A

Q. When you define static ip route with "ip route" command, what does it mean to add the word "permanent" at the end of the statement ?

- a. it is redistributed automatically into all routing protocols
- b. survives a reboot
- c. route stays in routing table even if the interface goes down
- d. becomes the default route

ans: C

OBJ. 37. CONFIGURE ROUTE REDISTRIBUTION IN A NETWORK THAT DOES NOT HAVE REDUNDANT PATHS BETWEEN DISSIMILAR ROUTING PROCESSES.

Q. Your router runs a igmp process with the process id of 1. It also runs a eigrp process with the process id of 1. You want to redistribute eigrp routes into igmp. What do you have to do ?

- a. nothing
- b. use "redistribute igmp" command in "router eigrp" section
- c. use "redistribute eigrp" command in "router igmp" section
- d. both b and c
- e. either b or c

ans: A

Note: IGRP & EIGRP processes with the same id will redistribute automatically

Q. True or False: Route distribution can take place only between 2 different protocols.

- a. True
- b. False

ans: False.

NOTE: Route distribution can take place between 2 sessions (or processes) of the same protocols.

Q. Metrics used by EIGRP: (choose all that apply)

- a. bandwidth
- b. cost
- c. delay
- d. hop count
- e. load
- f. mtu
- g. reliability

ans: A,C,E,F,G

Q. You want to redistribute rip into OSPF.
Which commands would you apply ? (Choose 2)

- a. router ospf
- b. router rip
- c. redistribute rip
- d. redistribute OSPF
- e. default-metric rip 10
- f. default-metric ospf 20

ans: A,C

Q. Metrics used by OSPF: (choose all that apply)

- a. bandwidth
- b. cost
- c. delay
- d. hop count
- e. load

- f. mtu
- g. reliability

ans: B

Q. You want to redistribute all the directly connected networks into IGRP process 1. Which command would you issue in the "router igrp 1" section ?

(Type the statement; NOT a multiple choice question)

ans: router(config-router)# redistribute connected

Q. Difference between metrics and administrative distances ?

- a. metrics are assigned to routes, administrative distances are assigned to route sources
- b. metrics are assigned to routes sources administrative distances are assigned to routes
- c. they are the same concept, except they are named differently for different protocols
- d. metrics do not have the "bandwidth" parameter
- e. metrics do not have the "load" parameter

ans: A

Q. You want to redistribute ospf process 1 routes to igrp process 1 with the following metrics:

Bandwidth = 10 Mbps
Delay = 50 microseconds
Load = 2/255
MTU = 1500 bytes
Reliability = 250/255

What command would you issue in "router igrp 1" section ?

ans: router(config-router)#redistribute ospf 1 metric 10000 5 250 2 1500

Note: Format: default-metric <bandwidth> <delay> <reliability> <load> <mtu>

Bandwidth = in kbps
delay = in tens of microseconds
reliability = in 1/255
load = in 1/255
MTU = in bytes

Q. When would you use default-metric <number> command ?

Choose 3

- a. redistribute into IGRP
- b. redistribute into EIGRP
- c. redistribute into RIP
- d. redistribute into OSPF
- e. redistribute into BGP

ans: CDE

Q. Which form of default-metric command would you use when you are redistributing into IGRP,EIGRP ?

- a. default-metric <bandwidth> <delay> <reliability> <load> <mtu>
- b. default-metric <delay> <bandwidth> <reliability> <load> <mtu>
- c. default-metric <delay> <bandwidth> <reliability> <mtu> <load>
- d. default-metric <bandwidth> <delay> <reliability> <mtu> <load>

e. default-metric <bandwidth> <delay> <load> <reliability> <mtu>

ans: A

Q. Metrics used by IGRP (choose all that apply)

- a. bandwidth
- b. cost
- c. delay
- d. hop count
- e. load
- f. mtu
- g. reliability

ans: A,C

OBJ. 38. CONFIGURE ROUTE REDISTRIBUTION IN A NETWORK THAT HAS REDUNDANT PATHS BETWEEN DISSIMILAR ROUTING PROCESSES

Q. You are redistributing external routes from eigrp into OSPF. What would it be labeled as ?

- a. unpredictable
- b. E1
- c. E2
- d. E

ans: C

Q. How do you force an external route into OSPF as E1 ?

- a. add metric-type 1 to the redistribute command.
- b. add "E1" to the redistribute command
- c. add "type E1" to the redistribute command
- d. add "route-type E1" to the redistribute command

ans: A

NOTE:

(e.g. redistribute eigrp 1 metric 100 metric-type 1 subnets)

Q. You want to redistribute eigrp process 1 routes into ospf. However, you want eigrp to suppress any specific routes that fall within 128.252.144.0/24 network. When it redistributes routes into OSPF, which extra command would you issue in the "router ospf" section besides "redistribute eigrp 1" command.
(Type the statement; NOT a multiple choice question)

ans: router(config-router)# summary-address 128.252.144.0 255.255.255.0

Q. When routing protocol 1 is redistributing into routing protocol routing 2 and vice versa, it is called _____ ?

- a. complete redistribution
- b. exchanged redistribution
- c. permanent redistribution
- d. mutual redistribution
- e. multi-redistribution

ans: D

OBJ. 39. RESOLVE PATH SELECTION PROBLEMS THAT RESULT
IN A REDISTRIBUTED NETOWRK

Q. To avoid routing loops, what should the default-metric be set to ?

- a. half of the native-metric
- b. at least 1 less than the native metric
- c. same as the native metric
- d. at least 1 larger than the native metric
- e. double of the native metric

ans: D

Q. Default Administrative distance for the following protocols :

RIP, IGRP, EIGRP, OSPF

- a. 100, 120, 90, 110
- b. 100, 120, 110, 90
- c. 120, 100, 90, 110
- d. 120, 90, 100, 110
- e. 90, 110, 120, 100

ans: C

Q. What is used in conjunction with summary routes to prevent routing loops during redistributions.

- a. duplicate summary address route destined for null0 interface
- b. routing profiles
- c. static routes
- d. static routes destined for a local interface
- e. access-lists that direct certain packets to null0 interface

ans: A

Note: ...so that when a summary-route fails, packet is dropped

Q. Default Administrative distances for the following protocols/routes:

Internal BGP, External BGP, Static Route, Connected Interface

- a. 20, 200, 1,0
- b. 0, 1, 200 20
- c. 200, 20, 1, 0
- d. 200, 1, 20, 0
- e. 200, 20, 0, 1

ans: C

Q. You are redistributing eigrp into RIP. You want to set administrative distance for internal EIGRP to 50 and that for external EIGRP to 80.

Which command would you run and in what section ?

(Type the statement; NOT a multiple choice question)

ans: distance 50 80

NOTE: (in the "router eigrp 1" section)

OBJ. 40. VERIFY ROUTE DISTRIBUTION

Q. You have used redistribution in your router's configuration.

However, you want to confirm that your router actually is forwarding packets from 128.252.0.0 . What 2 things would you do ?

- a. define an access-list that permits packets from 128.252.0.0
- b. debug ip packet access-list#
- c. apply the access-list to all interfaces
- d. apply the access-list to 1 interface
- e. sh ip route and look for 128.252.0.0

ans: A,B

Q. You are using redistribution. You want to see all the ip routes that has resulted after the redistribution. Which command ?

(Type the statement; NOT a multiple choice question)

ans: sh ip route

Q. You have defined a static route via an interface. Can this route be redistributed into RIP ?

ans: Yes.

Note: In fact, it will be distributed without the "redistribution static" command provided RIP configuration includes the destination network (of the static route) in it.

Q. You are running 2 EIGRP processes which redistribute into each other. How would the redistributed routes show up in the routing table ?

- a. D EX
- b. E1
- c. E2
- d. E

ans: A

NOTE: EIGRP external

OBJ. 41. DESCRIBE WHEN TO USE BGP TO CONNECT TO ISP

Q. You only have 1 link to your ISP. What should you use ?

- a. BGP
- b. RIP
- c. a static route
- d. OSPF
- e. EIGRP
- f. IGRP

ans: C

Q. You want to filter out the routes that pass through a specific AS, but you would like to keep that routes to that AS. Which protocol and which feature would you use ?

- a. IGRP and access-lists
- b. EIGRP and access-lists
- c. BGP and redistribution
- d. BGP and AS path filter

ans: D

Q. Which of the following conditions would dictate the use of BGP.
Choose 2.

- a. local AS uses a static route to to the ISP
- b. local AS and ISP use different policies
- c. local AS uses redistribution
- d. local AS needs to know about other ASs in the internetwork.

ans: B,D

Q. Command to define 128.252.144.254 of AS 76 as a neighbor in BGP :

- a. router(config-router)# neighbor 128.252.144.254 remote-as 76
- b. router(config-router)# ip bgp neighbor 128.252.144.254 remote-as 76
- c. router(config-router)# bgp neighbor 128.252.144.254 remote-as 76
- d. router(config-router)# neighbor 128.252.144.254 76
- e. router(config-router)# neighbor 128.252.144.254 as 76

ans: A

Q. Which of the following conditions would dictate the use of BGP.
Choose all that apply.

- a. 1 link to your ISP
- b. 1 live and 1 backup link to your ISP
- c. 2 live links and 1 backup link to your ISP
- d. 3 live links to your ISP

ans: C,D

Q. You want to use BGP. Your AS# is 76. You want your router to advertise 128.252.0.0/16 and 128.251.0.0/16 networks only. Which commands would you run ? Choose 3.

- a. router(config)# router bgp 76
- b. router(config-router)# network 128.251.0.0
- c. router(config-router)# network 128.252.0.0
- d. router(config)# router bgp
- e. router(config)# bgp as 76
- f. router(config-router)# bgp network 128.251.0.0
- g. router(config-router)# bgp network 128.252.0.0

ans: A,B,C

Q. You have just made some configuration changes in BGP. How do you clear the old BGP info from your router.
(Type the statement; NOT a multiple choice question)

ans: clear ip bgp *

Q. What is the difference between a neighbor and peer (BGP) ?

- a. peers have the same AS#
- b. neighbors have the same AS#

Q. You have just made some configuration changes in BGP. How do you clear the old BGP info from your router.

ans: clear ip bgp *

Q. What is the difference between a neighbor and peer (BGP) ?

- a. peers have the same AS#
- b. neighbors have the same AS#
- c. peer have different AS#
- d. neighbors have different AS#
- e. none

ans: E

Note: Any 2 routers that have opened a TCP connection to each other for the purpose of exchanging routing information are known as peers or neighbors.

Q. 2 examples of exterior protocols ?

- a. BGP
- b. EIGRP
- c. EGP
- d. IGP
- e. OSPF

ans: A,C

Q. Which came first ? EGP or BGP ?

ans : EGP

Q. T/F : The concept of "internet core" was continued on to BGP from EGP.

ans: False

Q. BGP does routing between _____ ?

- a. class B networks
- b. class C networks
- c. DNS domains
- d. WINS domains
- e. Autonomous systems

ans: E

Q. Which protocol does BGP use for transport ?

- a. SPX
- b. IP
- c. TCP
- d. TCP and SPX

ans: C

Q. In BGP, a neighbour is also called a _____ ?

- a. router
- b. bgprouter
- c. peer
- d. hop
- e. border router

ans: C

OBJ. 42. DESCRIBE METHODS TO CONNECT TO AN ISP USING STATIC & DEFAULT ROUTES, and BGP.

Q. Which TCP port does BGP use ?

- a. 171
- b. 173
- c. 177
- d. 179

ans: D

Q. Command to set a default route via 128.252.5.254

- a. router(config)# ip route 128.252.5.254 default
- b. router(config)# ip route 0.0.0.0 128.252.5.254
- c. router(config)# route ip 0.0.0.0 0.0.0.0 128.252.5.254
- d. router(config)# ip route 0.0.0.0 0.0.0.0 128.252.5.254
- e. router(config)# route 0.0.0.0 0.0.0.0 128.252.5.254

ans: D

Q. Which version of BGP uses CIDR ?

- a. BGP2
- b. BGP4
- c. BGP6
- d. BGP8

ans: B

Q. Command to set a default route via interface e0.

- a. router(config)# ip route e0 default
- b. router(config)# ip route 0.0.0.0 e0
- c. router(config)# route ip 0.0.0.0 0.0.0.0 e0
- d. router(config)# route 0.0.0.0 0.0.0.0 e0
- e. router(config)# ip route 0.0.0.0 0.0.0.0 e0

ans: E

Q. T/F : The concept of "internet core" was continued on to BGP from EGP.

ans: False

Q. You run 'sh ip route'. Which letter/digit/character combination code would you see at the beginning of a route if it was a BGP route ?

- a. B
- b. BG
- c. E
- d. E1
- e. E2

ans: A

Q. You are using OSPF as your internal routing protocol. How do you redistribute the default-route into the OSPF AS ?

(Type the statement; NOT a multiple choice question)

ans: router(config)# default-information originate always

OBJ. 43. COMPARE THE DIFFERENCES BETWEEN WAN CONNECTION TYPES:

DEDICATED,
ASYNCHRONOUS DIAL-IN,
DIAL-ON-DEMAND and
PACKET-SWITCHED SERVICES

Q. PSN = ?

- a. Public Switched Network
- b. Packet Switched Network
- c. Packet Server Network
- d. Packet Segmented Network
- e. Packet Served Network

ans: B

Q. Which of the following networks can run CDP ? Choose all that apply.

- a. X.25
- b. Frame-Relay
- c. Ethernet
- d. Token Ring

ans: B,C,D

NOTE: X.25 can not support SNAP encapsulation, and therefore, can not run CDP

Q. Frame Relay: subinterfaces allow you to use multiple _____ on a single interface ?

- a. encapsulations
- b. virtual circuits
- c. static routes
- d. routing protocols

ans: B

Q. Which of the following networks can run CDP. Choose all that apply.

- a. HDLC
- b. PPP
- c. FDDI
- d. X.25

ans: A,B,C

Q. Two kinds of subinterfaces in Frame Relay are _____ and _____ ?

- a. Point-to-Point
- b. Multipoint
- c. pvc
- d. svc
- e. lmi
- f. crc

ans: A,B

NOTE: Point-to-point subinterface connects to 1 PVC
Multipoint subinterface connects to more than 1 PVCs

Q. Network layer address of a X.25 device consists of ____ digits, of which first ____ bits identifies the network ?

- a. 12,3
- b. 13,3

- c. 10,3
- d. 14,4

ans: D

NOTE:

one could think of this as 4 digit country code and 10 digit phone number just like in US

Q. LMI= ?

- a. set of enhancements to the basic frame relay specification
- b. any interface that is running HDLC encapsulation
- c. ATM extensions
- d. LANE Module Interface

ans: A

NOTE: LMI= Local Management Interface

Q. A frame relay subinterface is serving a PVC . What happens if the PVC goes down ?

- a. subinterface stays up
- b. subinterface goes down
- c. subinterface stays up for a preconfigured amount of time before going down
- d. subinterface gets redirected to another physical interface

ans: B

Q. What is the range of available for subinterfaces ?

- a. 16
- b. 512
- c. 1024
- d. $2^{20} - 1$
- e. $2^{32} - 1$

ans: E

OBJ. 44. DETERMINE WHEN TO USE PPP, HDLC, LAPB, and IETF ENCAPSULATION TYPES

Q. What is a tunnel interface used for ?

- a. to forward traffic of a protocol to a network that does not support that protocol
- b. to drop packets w/o processing
- c. to save dialup configuration settings
- d. to forward packets to a OSPF area other than 0

ans: A

Q. Which encapsulation must be supported if CDP is to work ?

- a. ARPA
- b. novell-ether
- c. ethernet_II
- d. 802.2
- e. SNAP
- f. PPP

ans: F

Q. You are using LAPB on interface s0. You want to enable whole compression. Which 2 kinds of compressions are available.

- a. compressor
- b. payload
- c. ietf
- d. crc4
- e. predictor
- f. stacker

ans: E,F

Q. When to use HDLC encapsulation ?

- a. point-to-point links
- b. dialup links
- c. packet switched public networks
- d. SMDS networks
- e. ATM networks

ans: A

Q. Command to enable payload compression on frame-relay:

- a. router(config-if)# frame-relay compression payload
- b. router(config-if)# compression payload
- c. router(config)# compression int s0
- d. router(config-if)# frame-relay payload-compress

ans: D

Q. When would you use PPP encapsulation ? Choose 2

- a. point-to-point links
- b. dial-up-links
- c. packet switched public networks
- d. ethernet
- e. token ring

ans: A,B

Q. ABM= ?

- a. Area Border Media
- b. Asynchronous Balanced Mode
- c. Asynchronous Bandwidth Multiplexing
- d. ATM Bearing Medium

ans: B

NOTE: a transfer mode between 2 devices where each can initiate transmission

Q. Command to enable TCP header-compression on s0 interface ?

- a. router(config-if)# ip tcp header-compression
- b. router(config)# compression int s0 header
- c. router(config-if)# tcp compression header
- d. router(config-if)# tcp header-compression
- e. router(config-if)# ip tcp compression header

ans: A

Q. When to use LAPB encapsulation ?

- a. point-to-point links
- b. dialup links
- c. packet switched public networks
- d. SMDS networks
- e. ATM networks

ans: C

Q. When would you use ietf encapsulation ?

- a. on frame relay interfaces that connect to non-cisco routers
- b. on ATM interfaces that connect to cisco devices
- c. on ATM interfaces that connect to non-cisco devices
- d. on high speed (52Mbps) serial interfaces
- e. on frame relay interfaces that connect to cisco routers

ans: A

Q. Command to configure interface e0 to use LAPB and allow more than one protocol to run on it.

(Type the statement; NOT a multiple choice question)

ans: router(config-if)# encapsulation lapb multi

OBJ. 45. LIST AT LEAST FOUR COMMON ISSUES TO BE CONSIDERED WHEN EVALUATING A WAN SERVICE

Q. Which of the follwoing is/are packet-switched/packet-based. Choose all that apply.

- a. frame-relay
- b. X.25
- c. SMDS
- d. ATM

ans: B,C

Q. Which of the follwoing is/are connection-oriented ? Choose all that apply.

- a. frame-relay
- b. X.25
- c. SMDS
- d. ATM

ans: A,B

Q. Which of the following has/have built-in error checking ? Choose all that apply.

- a. frame-relay
- b. X.25
- c. SMDS
- d. ATM

ans: A,B

Q. Which of the following is/are capable of providing bandwidth over 40Mbps ? Choose all that apply.

- a. frame-relay
- b. X.25
- c. SMDS
- d. ATM

ans: A,C,D

Q. Choose 4 most common issues from the following to be considered when evaluating a WAN service.

- a. bandwidth
- b. cost
- c. availability
- d. ease of management
- e. scalability
- f. redundancy

ans: A,B,C,D

OBJ. 46. DESCRIBE THE COMPONENTS THAT MAKE UP ISDN CONNECTIVITY

Q. Which of the following is NOT an ISDN component ?
(choose 1)

- a. NT1
- b. NT2
- c. BT
- d. TA
- e. TE1
- f. TE2
- g. LT
- h. ET

ans: C

Q. You have the following setup:

REGULAR PHONE ----- TA ----- NT1 ----- ISDN SWITCH

What reference point is between "Regular Phone" and "TA" ?
What reference point is between "NT1" and "ISDN switch" ?

- a. R,S
- b. S,T
- c. T,U
- d. R,U
- e. U,U

ans: D

Q. You have the following setup:

PC ----- NT1 ----- ISDN SWITCH

What reference point is between PC and NT1 ?
What reference point is between NT1 and ISDN Switch ?

- a. R,S
- b. S,T
- c. S/T, U
- d. T, U
- e. R,U

ans: C

Q. Which ISDN component combines Layer 2 and 3 functions and is typically found in PBXs ?

- a. TE1
- b. TE2
- c. NT1
- d. NT2
- e. TA

ans: D

OBJ. 47. CONFIGURE ISDN BRI

Q. Command to define the SPID of the first B-channel on a BRI interface as 314935123401

- a. router(config-if)# spid1 314935123401
- b. router(config-if)# spid 314935123401
- c. router(config-if)# isdn spid1 314935123401
- d. router(config-if)# isdn id 314935123401
- e. router(config-if)# isdn string 314935123401

ans: C

Q. isdn switch-type command

- a. is a global configuration command
- b. is a interface configuration command
- c. can be used as either global or interface configuration command
- d. can be used for primary ISDN lines only

ans: A

Q. Command to see dialer group info:

- a. show access-lists
- b. show interface
- c. show dialer
- d. show dialer groups
- e. show dialer profiles

ans: C

Q. Command to tell the bri interface to dial 9358500 to reach the device with the IP address 128.252.144.254 at the speed 64kbps.

- a. router(config-if)# dialer map ip 128.252.144.254 9358500 speed 64
- b. router(config-if)# dialer ip 128.252.144.254 9358500 speed 64
- c. router(config-if)# map ip 128.252.144.254 9358500 speed 64
- d. router(config-if)# dialer map 128.252.144.254 9358500 speed 64
- e. router(config-if)# dialer map ip 128.252.144.254 9358500 64

ans: A

Q. What is the difference between the "dialer map" comamnd and the "dialer-group command"

- a. dialer map command tells the interface what is interesting traffic to place a call & dialer-group command tells the interface what number to call
- b. dialer map command tells the interface what number to call & dialer-group command tells the interface what is interesting traffic to place the call.
- c. dialer map maps routers and phone numbers, whereas dialer-group applies dialer maps
- d. dialer map maps ip to phone numbers, whereas dialer-group groups dialing interfaces in groups of networks

ans: B

Note: dialer-group only defines indirectly. dialer-group points to a particular dialer-list and the list defines interesting traffic

Q. Command to find info on the D channel:

- a. sh controller bri0
- b. sh isdn controller
- c. sh isdn channels
- d. sh isdn channel d
- e. sh controller d

ans: A

Q. You have already defined a dialer list 1. How do you tell the bri0 interface that it belongs to that dialer list.

- a. router(config)# interface bri0 dialer-list 1
- b. router(config)# interface bri0 dialer-group 1
- c. router(config-if)#dialer-list 1
- d. router(config-if)#dialer-group 1
- e. router(config-if)#dialer group 1

ans: D

Q. Command that will tell the router to start using the 2nd B channel for multilink when either inbound or outbound traffic utilization exceeds 50%.

(Type the statement; NOT a multiple choice question)

ans: router(config-if)#dialer load-threshold either 128

Note: load varies between 1 and 255. By giving it the value of 127, you mean 50%
substitute "in" for inbound
substitute "out" for outbound

Q. Command that enables multilink on either B channels.

- a. router(config-if)# ppp multilink
- b. router(config-if)# multilink
- c. router(config-if)# isdn multilink
- d. router(config-if)# multilink ppp
- e. router(config-if)# multilink enable

ans: A

Q. How many SPIDs do you have to define for each bri interface ?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5

ans: 2

Note: for each B -channel

Q. Command that dictates the closing of the connection through your bri0 interface after 3 minutes of no activity.

(Type the statement; NOT a multiple choice question)

ans: router(config-if)#dialer idle-timeout 180

OBJ. 48. CONFIGURE LEGACY DIAL-ON-DEMAND ROUTER (DDR)

Q. How do you define the interesting traffic as anything that passes access-list 3 ?

- a. router(config)#dialer-list 1 3
- b. router(config)#dialer-list 1 access-list 3
- c. router(config)#dialer-group 1 access-list 3
- d. router(config)#dialer-group 1 3
- e. router(config)#dialer-list 1 list 3

ans: E

Q. You have 4 interfaces that belong to rotary group 3. You want to assign a priority to an interface such that it always is the first one to be used ?

- a. router(config-if)# dialer priority 255
- b. router(config-if)# dialer-list 255
- c. router(config-if)# dialer map 255
- d. router(config-if)# dialer-map 255
- e. router(config-if)# dialer priority high

ans: A

Note: Priority values range from 0-255. You also have to assign all the other interfaces a priority less than 255.

Q. You want to use CHAP as the ppp authentication scheme on bri0. Which command ?

- a. router(config-if)#authentication chap
- b. router(config-if)#ppp chap
- c. router(config-if)#ppp authentication chap
- d. router(config-if)#ppp password chap
- e. router(config-if)#ppp security chap

ans: C

Q. You want to use the username "johndoe" and the password "ccie" when your router's dialup interfaces connect to the dialup server. How do you configure this pair ?
(Type the statement; NOT a multiple choice question)

ans: router(config)#username johndoe password ccie

Q. How do you assign a physical interface to rotary group 3 ?
(Type the statement; NOT a multiple choice question)

ans: router(config-if)#dialer rotary-group 3

Q. How do you create a logical interface for rotary group 2 ?

- a. router(config)# rotary-group 2
- b. router(config)# rotary group 2
- c. router(config)# interface dialer 2
- d. router(config)# rotary interface 2
- e. router(config)# interface rotary 2

ans: C

Q. What does the "dialer wait-for-carrier 30" command do ?

- a. makes the the interface wait for 30 seconds for carrier to come up when it places a call
- b. makes the the interface wait for 30 seconds before hanging up (after the last interesting packet has passed)
- c. makes the the interface wait for 30 seconds after the first packet of interesting traffic before making the call
- d. makes the the interface wait for 30 seconds before hanging up (after all traffic has passed)

ans: A

Q. What does the "80" mean in the "dialer hold-queue 80 timeout 20" command ?

- a. 80 frames are stored in the queue at any given moment
- b. 80 packets are stored in the queue at any given moment
- c. 80 packets can be stored in the queue until the central site router returns the call.
- d. hold all traffic in queue for a maximum of 80 seconds until the central site router returns the phone call.

ans: C

Q. What does the "20" mean in the "dialer hold-queue 80 timeout 20" command ?

- a. If the the the central site router does not return the call in 20 seconds, packets are dropped.
- b. If the the the central site router does not return the call in 20 milliseconds,
- c. a maximum of 100 (80+20) packets can be held in the queue before the return of the phone call.
- d. after the dialup session is established, inactivity of 20 seconds forces termination of the session.

ans: A

Q. Your router reaches multiple destinations through the same modem. You want your modem to timeout its connection after 1 minute of inactivity on a dialup link when there is interesting traffic that requires the same modem to dialup a different destination. Which command ?

- a. dialer time-out 60
- b. dialer inactivity-out 60
- c. dialer fast-idle 60
- d. dialer contention 60
- e. dialer backup 60

ans: C

Q. What is dialer logical interface used for ?

- a. DDR
- b. BDR
- c. modem statistics
- d. isdn statistics

ans: A

Q. You have a modem attached to your router. How do you tell the router that this modem is an on-demand interface ?

- a. router(config)#dialer bri0
- b. router(config)#dialer in-band bri0
- c. router(config-if)#dialer in-band
- d. router(config-if)#dialer on-demand
- e. router(config-if)#dialer ddr

ans: C

OBJ. 49. CONFIGURE DIALER PROFILES

Q. What does the "dialer pool 2" command do ?

- a. limits 2 interfaces to dialer pool
- b. defines 2 sec as the minimum wait before hanging up a connection
- c. define access list 2 as the criteria for interesting traffic
- d. defines a pool of dialup settings as "2" to which dial-up interfaces can be assigned to.

ans: D

Q. How do you tell your router's bri0 interface to belong to pool 2 and have the priority of 255 in that pool ?
(Type the statement; NOT a multiple choice question)

ans: router(config-if)#dialer pool-member 2 priority 255

Q. What is the purpose of dialer profiles ?

- a. An interface can use different profiles of dialup settings as needed.
- b. defines a list of dialup users
- c. configures dialup security parameters
- d. configures legacy DDR

ans: A

Q. What does the "dialer string" command do ?

- a. defines ppp strings to be remitted during dialup setup
- b. identifies the telephone number of the targeted destination
- c. defines the welcome message for incoming dialup users
- d. defines username and password to be used during dialup

ans: B

OBJ. 50. VERIFY DDR OPERATION

Q. One of your router's interfaces just dialed up a link that connects your router to 128.252.5.254. What command would you run to make sure you have a route to 128.252.5.254 ?

- a. sh dialer
- b. sh isdn
- c. sh ip route
- d. sh isdn status
- e. sh route

ans: C

Q. Which command shows dialer type, dialer state, dialer string, idle timer, fast-idle time etc.

- a. sh isdn
- b. sh isdn status
- c. sh int
- d. sh dialup
- e. sh dialer

ans: E

Q. Which command turns on ISDN Q921 packets debugging ?

- a. show isdn status
- b. show dialer
- c. debug dialer
- d. debug isdn q921
- e. debug isdn dialer q921

ans: D

Q. Which command shows the isdn switch type and isdn layer 1,2,3 status ?

- a. sh isdn status
- b. sh int bri0
- c. sh isdn switch
- d. sh isdn layers
- e. sh dialer isdn

ans: A

OBJ. 51. CONFIGURE DIAL BACKUP

Q. Your primary link is via interface s0. Your backup link is via interface bri0. You want your backup link to comeup 15 seconds after s0 goes down and stays up 45 seconds after s0 comes backup. How do you configure ? (Type the statement; NOT a multiple choice question)

ans: router(config-if)# backup delay 15 45

Q. You have configured your backup interface with the following command.

```
router(config)# backup load 75 5
```

Once the backup interface has been activated, when will it be deactivated ?

- a. when the primary interface's transmitting load drops below 75% of its bandwidth
- b. when the backup interface's transmitting load drops below 75% of its bandwidth
- c. when the primary interface's transmitting load drops below 5% of its bandwidth
- d. when the combined load of the primary and the backup interfaces' transmitting load drops below 5% of their bandwidth
- e. when the combined load of the primary and the backup interfaces' transmitting OR receiving load drops below 5% of their bandwidth

ans: E

Q. Name 2 ways to get around the fact that backup interfaces can not be used for other things:

- a. dialer profiles
- b. static routes
- c. floating static route DDR design
- d. multilink ppp

ans: A,C

Q. You are using bri0 interface as a dial backup interface. Normally, can you still use bri0 for other operations ?

- a. yes
- b. No

ans: A

Q. You want to use bri1 interface as a backup interface for interface bri0. What command do you use ?

- a. router(config)# backup interface bri0 bri1
- b. router(config)# backup interface bri1 bri0
- c. router(config-if)# backup interface bri1 (on bri0)
- d. router(config-if)# backup interface bri0 (on bri1)

ans: C

NOTE: on the primary interface (bri0)

OBJ. 52. VERIFY DIAL BACKUP OPERATION

Q. Which command gives the status of a link ?

- a. sh dialer
- b. sh ip route
- c. sh links
- d. sh status

ans: A

Q. What command ensures the connectivity between your router and your destination after a backup interface has been activated.

- a. sh ip route
- b. ping
- c. sh dialer
- d. debug dialer

ans: B

NOTE: sh ip route can only show a route, but it does not guarantee connectivity

OBJ. 53. CONFIGURE MULTILINK PPP

Q. You have 2 BRI interfaces on your router. You want to enable multilink ppp. In which section , would you run the "ppp multilink" command ?

- a. In the interface configuration section of only 1 of the BRI interfaces
- b. In the interface configuration section of both of the BRI interfaces

- c. In the interface configuration section of the dialer interface
- d. In the global configuration section

ans: C

- Q. You are configuring multilink ppp. You want the 2nd interface to be enabled only when the load is 200/255 inbound. Which command ?
(Type the statement; NOT a multiple choice question)

ans: dialer load-threshold 200 in

OBJ. 54. VERIFY MULTILINK PPP

- Q. You just ran "sh user" command to find out which virtual "LINE"s each of the interfaces are connected through. Which command would you use to find out which one is the master link (multilink ppp).
(Type the statement; NOT a multiple choice question)

ans: sh ppp multilink

- Q. You want to find out whether layer1 is "active" or not on each of the ISDN interfaces. Which command ?

- a. sh isdn status
- b. sh ppp
- c. sh user
- d. debug ppp
- e. sh isdn layer

ans: A

- Q. Which command would you use to find out which virtual "Line" each interface is connected through (multilink ppp) ?

- a. sh ppp multilink
- b. sh user
- c. sh isdn status
- d. sh ppp multilink line
- e. sh ppp multilink interface

ans: B

NOTE: This command can be used in conjunction with "sh ppp multilink" command to find out which one is the master link.

- Q. Which command will show you which interface is being used for the currently active multilink ppp session.

- a. sh isdn status
- b. sh ppp multi int
- c. sh user
- d. sh ppp multi
- e. sh ppp active

ans: D

- Q. You want to monitor multilink ppp activity. Which command ?
(Type the statement; NOT a multiple choice question)

ans: debug ppp multilink

- Q. You have an active multilink ppp session. You run the "sh user" command. What would you see in the host column ?

- a. an IP address
- b. SPID numbers
- c. hostname
- d. The words "Virtual PPP(Bundle)"

ans: D

Q. Which command will show you number of member links in the active multilink ppp session ?

- a. sh user
- b. debug ppp multilink
- c. sh isdn status
- d. sh ppp links
- e. show ppp multi

ans: E

OBJ. 55. CONFIGURE SNAPSHOT ROUTING

Q. Which of the following problems does snapshot routing solve ?

- a. Routing loops may occur when two protocols distribute into each other
- b. outdated information from a neighbor may reinstate a befallen route
- c. ISDN links may be activated just to exchange routing info even if there is no real traffic.
- d. Count-to-infinite problem

ans: C

Q. Your router's snapshot client interface (bri0) is on "quiet" state. You want it to start exchanging routing information with the server ASAP. Which command do you run ?

(Type the statement; NOT a multiple choice question)

ans: clear snapshot quiet-time bri0

NOTE: It actually waits 2 minutes

Q. How do you define dialer map for a snapshot client to a server named "server1"? Number to dial to reach the server is 9351234. Priority for this dialer map should be 2.

- a. router(config-if)# dialer map snapshot 2 name server1 9351234
- b. router(config-if)# dialer map snapshot 2 server1 9351234
- c. router(config-if)# dialer map snapshot 2 name server1 string 9351234
- d. router(config-if)# dialer map snapshot name server1 9351234
- e. router(config-if)# dialer map snapshot priority 2 name server1 9351234

ans: A

Q. Which command displays snapshot routing information associated with bri0

- a. show bri0 snapshot
- b. show int bri0 snapshot
- c. show snapshot routing
- d. show snapshot bri0
- e. show snapshot routing bri0

ans: D

Q. You are configuring a snapshot client. You have already done the "snapshot client" command to set the quiet time and active time durations. What else do you have to do ?

- a. nothing
- b. setup a dialer profile
- c. define a dialer map with a "dialer map snapshot" command
- d. setup an access-list
- e. provide a dialer string

ans: C

Q. Quiet time has to be _____ than the active time when configuring snapshot routing.

- a. at most 1 minute less than
- b. at most equal to
- c. at least equal to
- d. at least 1 minute longer
- e. at least 3 minutes longer

ans: E

Q. You have already configured a snapshot client with an active time of 30 minutes and a quiet time of 6 hours. You are now configuring the server. What command do you run ?

- a. router(config-if)# snapshot server 6
- b. router(config-if)# snapshot server 30
- c. router(config-if)# snapshot server 360
- d. router(config-if)# snapshot server 1800
- e. router(config-if)# snapshot server 21600

ans: B

Q. Snapshot routing uses the _____ design model ?

- a. peer to peer
- b. many to many
- c. hub and spoke
- d. client-server

ans: D

Q. You are configuring a client for snapshot routing. You want this ISDN interface to have an active time of 30 minutes and quiet time of 6 hours. Command ?
(Type the statement; NOT a multiple choice question)

ans: router(config-if)# snapshot client 30 360

OBJ. 56. CONFIGURE IPX SPOOFING

Q. What do you have to do before you can turn on ipx spoofing or watch-dog spoofing.

- a. turn off fast switching for ipx
- b. setup ipx idel-time
- c. issue the command "ipx route-cache"
- d. turn off store and forward switching
- e. turn off snapshot routing

ans: A

NOTE: Forces the router to look inside the packets

Q. You have configured dialer idle time to be 5 minutes. You have also set the spx-idle-time to be 2 minutes. How much time will go by before SPX spoofing will actually start ?

- a. 2 minutes
- b. 3 minutes
- c. 5 minutes
- d. 7 minutes

ans: D

Q. You have turned on SPX spoofing, but did not set an idle time. What is the default idle time ?

- a. 30 sec.
- b. 60 sec.
- c. 90 sec.
- d. 120 sec.
- e. 180 sec.

ans: B

Q. Which command turns on ipx watchdog spoofing ?

- a. router(config)# spoof watchdog
- b. router(config)# no shutdown spoof watchdog
- c. router(config)# ipx watchdog-spoof
- d. router(configi-if)# ipx watchdog-spoof
- e. router(configi-if)# no shutdown spoof watchdog

ans: C

Q. Which command turns on ipx spoofing ?

- a. router(config)# ipx spx-spoof
- b. router(config)# ipx watchdog-spoof
- c. router(config)# ipx route-cache
- d. router(config)# spx-spoof
- e. router(config)# no ipx spx-spoof

ans: A

Q. How do you set the SPX idle time to 2 minutes ?
(Type the statement; NOT a multiple choice question)

ans: router(config)# ipx spx-idle-time 120

Q. Which command turns off fast switching for IPX ?

- a. ipx route-cache
- b. no ipx spx-spoof
- c. no ipx route-cache
- d. no ipx watchdog-spoof
- e. no route-cache ipx

ans: C

AN EXAMPLE OF EACH.

Q. Which of the following are routable protocols ?

- a. Appletalk
- b. IP
- c. IPX
- d. LAT
- e. MOP
- f. Netbeui

ans: A,B,C

Q. What is the key difference between any routable protocol and any non-routable protocol ?

- a. addressing information at layer 2
- b. addressing information at layer 3
- c. addressing information at layer 4
- d. bandwidth information
- e. cost information

ans: B

OBJ. 58. DEFINE VARIOUS BRIDGING TYPES AND DESCRIBE WHEN TO USE EACH TYPE

Q. When would you use encapsulation bridging ?

- a. for bridging non routable protocols
- b. when the same router needs to route and bridge the same protocol
- c. to connect a remote site that lacks routing capabilities
- d. when translation is necessary

ans: A

Q. You are trying to bridge some hosts on a FDDI ring and an ethernet network. What kind of bridging would you use ?

- a. Transparent bridging
- b. SRB
- c. SRT
- d. SR/TLB
- e. NOT possible. FDDI rings can only bridge transit ethernet packets

ans: E

Q. You want to bridge 2 different networks: one that has RIFs (e.g. token ring) and the another that does not. What kind of bridging would you use ?

- a. Transparent
- b. Encapsulation
- c. IRB
- d. SRB
- e. SRT
- f. SR/TLB

ans: E

Q. What is Source Route Bridging ?

- a. Bridging that brings together multiple ethernet networks
- b. Bridging that brings together multiple token ring networks
- c. Bridging that brings together multiple FDDI ring networks

- d. Bridging that brings together multiple SMDS networks
- e. Bridging that brings together multiple Frame Relay networks

ans: B

Q. What would be the simplest solution if you are trying to bridge 2 ethernet networks ?

- a. use transparent bridging
- b. use IRB
- c. use SRB
- d. use SRT
- e. use SR/TLB

ans: A

Q. You are bridging 2 different network (ethernet and token ring) and you need to use translation between protocols. Which kind of bridging would you use ?

- a. IRB
- b. SRB
- c. SRT
- d. transparent bridging
- e. SR/TLB

ans: E

Q. You are trying to migrate a bridged network to a routed network. What would be the simplest solution ?

- a. IRB
- b. SRB
- c. SRT
- d. transparent bridging
- e. SR/TLB

ans: A

Q. SRT is a mix of _____ & _____ ?

- a. transparent bridging, IRB
- b. IRB, SRB
- c. IRB, SR/TLB
- d. SRB, SR/TLB
- e. SRB, Transparent Bridging

ans: E

Q. Which of the following are types of bridging ?

- a. Transparent
- b. Translational
- c. Encapsulated

OBJ. 59. CONFIGURE TRANSPARENT BRIDGING

Q. Which command will display entry for device with the hardware address of 00:80:00:1A:2B:3C (transparent bridging) ?

- a. router# show bridge 0080.001A.2B3C
- b. router# show bridge-group 0080.001A.2B3C

- c. router# show bridge MAC 0080.001A.2B3C
- d. router# show bridge ethernet 0080.001A.2B3C

ans: A

Q. You want to know which port is the root for the spanning tree. Which command would you issue ?

- a. router# sh bridge root
- b. router# sh bridge-group root
- c. router# sh bridge-group span
- d. router# sh bridge table
- e. router# sh span

ans: E

Q. How do you assign a cost of 100 for bridge group 1 to go out interface e0.

(Type the statement. NOT a multiple choice question)

ans: router(config-if)#bridge-group 1 path-cost 100

Q. Which command will show the bridge parameters (hello time, max age, forward delay) for each bridge group ?

- a. router# sh span
- b. router# sh bridge parameters
- c. router# sh bridge-group parameters
- d. router# sh span parameters

ans: A

Q. What is Bridge Protocol Data Unit ?

- a. protocol to transfer payload information
- b. spanning tree protocol hello packet to exchange info among bridges
- c. protocol to send keep alives
- d. protocol to exchange bridging information among interfaces

ans: B

Q. Which command will display all entries for hosts reachable via interface ethernet 0 (transparent bridging) ?

- a. router# show span ethernet 0
- b. router# show bpdu ethernet 0
- c. router# show bridge interface ethernet 0
- d. router# show bridge ethernet 0
- e. router# show bridge ethernet 0 hosts

ans: D

Q. Which command will show the priority of all the bridges and the protocol (ieee/dec) used for the bridging ?

- a. router# sh span
- b. router# sh bridge protocol
- c. router# ssh bridge interfaces
- d. router# sh span detail
- e. router# debug bridge span

ans: A

Q. When you are configuring transparent bridging, you have 2 choices for protocol:

ieee and dec. Are they compatible ?

- a. yes
- b. no

ans: B

Q. You want interface e0 to belong to bridge group 1. How do you set that ?

- a. router(config)# bridge group int e0 1
- b. router(config)# bridge-group int e0 1
- c. router(config-if)# bridge-group 1
- d. router(config-if)# bridge group 1
- e. router(config-if)# bridge span 1

ans: C

Q. How do you set the priority for the bridge group 1 to a value of 24 for spanning tree protocol ?
(Type the statement. NOT a multiple choice question)

ans: router(config)# bridge 1 priority 24

OBJ. 60. CONFIGURE IINTEGRATED ROUTING AND BRIDGING (IRB)

Q. Which command enables IRB on cisco routers ?

- a. enabled by default
- b. router(config)#irb
- c. router(config)# bridge irb
- d. router(config)# bridge irb on
- e. router(config)# bridge integrated

ans: C

Q. You have defined bridge group 2 between 2 interfaces. Now, you want to use IRB to do routing between this bridge and other interfaces. Which comamnd creates the appropriate interface for IRB ?
(Type the command. NOT a multiple choice question)

ans: router(config)# interface bvi 2

Q. True/False: steps to configure a logical interface are essentially the same as those for a physical inteface.

ans: True

Q. IRB, by default, bridge _____ protocol(s).

- a. IP only
- b. IP and IPX
- c. IP and Appletalk
- d. IPX and Appletalk
- e. IP, IPX and Appletalk

ans: E

Q. IRB: Which command will show you which protocols are bridged and which protocols are routed on interface e0 ?

- a. router# sh int e0 irb
- b. router# sh int e0 bridge
- c. router# sh int e0 span

- d. router(config)# sh int e0 irb
- e. router(config-if)# sh bridge irb

ans: A

Q. True/False: A protocol can be routed and bridged on the same interface.

ans: False

Q. You want to know the IP address of the bvi1 interface.
Which command ?

- a. router# sh bvi1 ip
- b. router# sh ip bvi1
- c. router# sh int bvi1
- d. router# sh int bvi1 protocol
- e. router# sh protocol int bvi1

ans: C

Q. Which command will disable bridging of appletalk on bvi 3.
(Type the command. NOT a multiple choice question)

ans: router(config)# no bridge 3 bridge appletalk

Q. IRB stands for _____ ?

- a. Integrated Routing and Bridging
- b. Incorporated Routed Bridging
- c. Integrated Routing on Broadband
- d. Internetworkwide Routing and Bridging

NOTE: The same router routes and bridges the same protocol

Q. What is the range of numbers for logical interfaces ?

- a. 0-3
- b. 1-4
- c. 0-31
- d. 1-32
- e. $0-(2^{31}-1)$

ans: E

NOTE: BVI interfaces are logical interfaces

Q. Which limitation does bvi interfaces overcome ?

- a. backup dialer interfaces cannot be used for normal dialups
- b. IOS can not bridge and route the same protocol.
- c. IOS can not bridge more than 2 protocols
- d. IOS can not bridge more than 2 interfaces

ans: B

Q. Which logical interface is necessary for IRB ?

- a. null
- b. tunnel
- c. loopback
- d. dialer
- e. bvi

ans: E

OBJ. 61. DESCRIBE THE BASIC FUNCTION OF SOURCE-ROUTE BRIDGING (SRB)

Q. What is the most common use of SRB ?

- a. to connect 2 or more ethernet networks
- b. to connect 2 or more token ring networks
- c. to connect 2 or more FDDI ring networks
- d. to connect 1 ethernet and 1 token ring networks
- e. to connect 1 ethernet and 1 FDDI ring networks

ans: B

Q. 3 types of explorer packets are:

- a. local explorer packets
- b. remote explorer packets
- c. bridge explorer packets
- d. spanning explorer packets
- e. all-routes explorer packets

ans: A,D,E

Q. RIF stands for _____ ?

- a. Re-route Information Field
- b. Route Information Field
- c. Routing Integrated Field
- d. Reduced Intermedia Frame-exchange

ans: B

Q. RII stands for _____ ?

- a. Re-route Information Indicator
- b. Routing Information Indicator
- c. Route Integration Indicator
- d. Reduced Intermedia Integration

ans: B

NOTE: It is the most significant bit in the source MAC address
and is set by the source

Q. RIF is supported in _____ ?

- a. Ethernet, but not in Token Ring
- b. Token Ring, but not in Ethernet
- c. Neither Token Ring and Ethernet
- d. Both Ethernet and Token Ring

ans: B

OBJ. 62. CONFIGURE SRB

Q. Command to enable the explorer packet processing queue
and to specify queue depth of 20 ?
(Type the command. NOT a multiple-choice question)

ans: router(config)# source-bridge explorerq-depth 20

Q. Comamnd that disables IP routing ?

- a. disable routing ip
- b. disable ip routing
- c. no routing ip
- d. no ip routing
- e. ip no routing

ans: D

Q. Which command enables generation of RIFs for IP frames on interface tokenring 0.

- a. router(config-if)# multiring ip
- b. router(config-if)# ip rif
- c. router(config-if)# ip rif on
- d. router(config-if)# protocol ip rif
- e. router(config-if)# rif

ans: A

Q. How do you enable IBM bridging protocol for bridge group 5 when you configure SRB.

- a. router(config)# srb 5 ibm
- b. router(config)# srb 5 protocol ibm
- c. router(config)# bridge 5 ibm
- d. router(config)# srb bridge 5 protocol ibm
- e. router(config)# bridge 5 protocol ibm

ans: E

Q. Command that enables spanning explorer on an interface ?

- a. router(config-if)# srb
- b. router(config-if)# source-bridge
- c. router(config-if)# spanning srb
- d. router(config-if)# source-bridge spanning
- e. router(config-if)# spanning source-bridge

ans: D

Q. You have 2 token ring interfaces with the ring numbers 99 and 100. You want to setup SRB between these interfaces (bridge# 2). What comand would you run on the inetrface with the ring number 99 ? (Type the command. NOT a multiple-choice question)

ans: router(config-if)# source-bridge 99 1 100

Q. You are configuring SRB. How do you set path cost of 20 for an interface for the spanning tree. Assume that this interface is in bridge-group 5.

- a. router(config-if)# source-bridge spanning 5 path-cost 20
- b. router(config-if)# srb spanning 5 path-cost 20
- c. router(config-if)# source-bridge 5 path-cost 20
- d. router(config-if)# source-bridge spanning path-cost 20
- e. router(config-if)# source-bridge spanning 5 cost 20

ans: A

Q. If you are configuring SRB with more than 2 interfaces, what do you have to do ?

- a. not possible
- b. nothing additional needs to be done just because there are more than 2 interfaces involved

- c. create a source-bridge between each combination pair possible
- d. create a virtual ring
- e. use SRT

ans: D

Q. command to prohibit IP source routing ?

- a. no ip source-route
- b. no source-route
- c. no source-route ip
- d. no protocol ip source-route

ans: A

OBJ. 63. CONFIGURE SOURCE-ROUTE TRANSPARENT BRIDGING (SRT)

Q. What command turns on Source-Route Transparent Bridging ?

- a. no such command
- b. source-route
- c. source-route transparent
- d. srt

ans: A

NOTE: configuring SRT is just a combination of configuring SRB and Transparent Bridging.

Q. You have configured SRT. Which state best describes how the packets will be handled ?

- a. if the packet can be bridged, it is bridge. Or else, it is routed to its destination
- b. if the the packets come with SRB routing info, SRB is used. else transparent bridging is used.
- c. packets are bridged and translated , unless it comes with SRB routing info.
- d. packets are bridged transparently unless SR/TLB is also configured.

ans: B

Q. SRT stands for _____ ?

- a. Source Route Transparent-Bridging
- b. Source Route Translational Bridging
- c. Serial Router Transparent Bridging
- d. Source RARP Translational Bridging

ans: A

Q. T/F: Token Ring to Ethernet communication is possible by SRT.

ans: Flase

OBJ. 64. CONFIGURE SOURCE-ROUTE TRANSLATIONAL BRIDGING (SR/TLB)

Q. Command to define a "virtual ring" for the token ring interfaces:
(Assume the virtual ring number will be 5)

- a. router(config)# source-bridge access-ring 5
- b. router(config)# source-bridge virtual-ring 5
- c. router(config)# source-bridge ring-group 5
- d. router(config)# source-route ring-group 5

ans: C

Q. Your router's token ring interfaces are configured into a SRB (#2)(. You have defined a virtual ring for your token ring interfaces as ring-group 3. Your ethernet interfaces are bridged into transparent bridge group 1. You want to configure SR/TLB. Which of the following command would do ?

- a. router(config)# sr-tlb transparent 3 4 2 1
- b. router(config)# sr-tlb transparent 4 3 2 1
- c. router(config)# source-bridge transparent 3 4 2 1
- d. router(config)# source-bridge transparent 4 3 2 1
- e. router(config)# source-bridge 3 4 2 1

ans: C

Q. You are configuring SR/TLB. You have done the following:

1. configure a transparent bridge between your ethernet interfaces
2. configure a SRB between your token ring interfaces
3. used "source-bridge transparent" command to configure SR/TLB

which step did you miss ?

- a. creating a virtual bridge among all te ethernet and token ring interfaces
- b. creating a virtual ring for the token ring interfaces
- c. creating a virtual bridge for the ethernet interfaces
- d. issue " source-bridge translation" command

ans: B

Q. OUI stands for _____ ?

- a. Organizational Unit Identifier
- b. On Undefined Interface
- c. One Unit Interface
- d. Online Unit Identifier

ans: A

NOTE: Optional parameter for "source-bridge transparent" command

Q. How many path(s) is(are) allowed between SRB and transparent bridge groups when SR/TLB is configured ?

- a. 0
- b. 1
- c. 2
- d. 3
- e. 4

ans: B

NOTE: to avoid potential loops

Q. SR/TLB stands for _____ ?

- a. Source Route Translational Bridging
- b. Source Route Transparent Bridging
- c. Source Route Tertiary-layer Bridging
- d. Serial Router Translational Bridging
- e. Segmented Route Tertiary-layer Bridging

ans: A

OBJ. 65. VERIFY SRB OPERATION

Q. When you run "show source-bridge", you will see "srn", "bn", and "trn" columns for each interface in the "Local Interfaces" section. What do they mean ?

- a. type of interface
- b. whether or not the interface is part of the virtual ring
- c. where source-route information is forwarded from this interface
- d. state of the interface

ans: C

Q. You ran 'show rif", but no RIF timeout value is shown. What is the default RIF timeout ?

- a. 1 minute
- b. 5 minutes
- c. 10 minutes
- d. 15 minutes
- e. 30 minutes

ans: D

Q. You ran "show rif". You see the following as part of the output.

Hardware Addr.	How	Idle(min)	Routing Information Field
00.80.1a.2b.3c.4d	rg2	5	00:80:1a.2b.3c.4e

How was this RIF learned ?

- a. via 00.80.1a.2b.3c.4d
- b. via Ring Group 2
- c. via 00.80.1a.2b.3c.4e
- d. you can not determine the answer to this question from the information given above

ans: B

Q. You ran "show rif". You see the following as part of the output.

Hardware Addr.	How	Idle(min)	Routing Information Field
00.80.1a.2b.3c.4d	rg2	5	00:80:1a.2b.3c.4e

What does the "5" mean in the Idle column ?

- a. 5 seconds since the last direct response from 00.80.1a.2b.3c.4d
- b. 5 minutes since the last direct response from 00.80.1a.2b.3c.4d
- c. 5 minutes since any packet went out to 00.80.1a.2b.3c.4d
- d. 5 seconds since any packet went out to 00.80.1a.2b.3c.4d

ans: B

Q. You ran "show rif" on your router. How would a cached entry be represented ?

- a. -
- b. +
- c. *
- d. positive integer

ans: D

Q. Which 2 commands are enough to find out how your router (using SRB) finds a node with a given IP ?

- a. show arp
- b. show ip route
- c. show interface
- d. show rif
- e. show source-bridge

ans: A,D

NOTE: "show arp" command will yield the MAC address.
"show rif" command will yield the path info.

Q. You ran "show rif" command. Which codes would indicate "router's own interface" and "static entry" respectively ?

- a. - , +
- b. + , *
- c. * , -
- d. + , -
- e. - , *

ans: C

Q. Which command shows the RIF entry for each node ?
(Type the statement; NOT a multiple choice question)

ans: router# show rif

Q. You ran "show source-bridge" and you see the following in the "Local Interfaces" section:

	srn	bn	trn	r	p	s	n	maxhops	receive cnt	transmit cnt	drops
TR0				*				10			7

what does the "*" in the "r" column mean ?

- a. ring-group has been assigned to this interface
- b. ring-group has not been assigned to this interface
- c. at least one node reachable via this interface is without its RIF entry
- d. no node reachable via this interface is without its RIF entry

ans: A

OBJ. 66. IDENTIFY POTENTIAL SOURCES OF CONGESTION IN AN APPLE TALK NETWORK

NOTE: There is really not much to know about this objective as it states except the fact that appletalk is chatty by its nature.

Appletalk talk is chatty because it does many functions automatically which have to be configured and maintained in other protocols. However, this objective may be a way for Cisco to ask general appletalk questions, especially since appletalk is not covered in CCNA exam.

Q. Equivalent of which of the following services are provided automatically in appletalk. Choose 3.

- a. DNS
- b. RIP
- c. HTTP
- d. DHCP
- e. VLAN

ans: A,D,E

Q. You to know the MAC addresses of the Macintosh computers your router knows about ? Which command ?

- a. sh appletalk
- b. ah appletalk arp
- c. sh arp appletalk
- d. sh arp
- e. sh mac

ans: B

Q. Which protocol from the appletalk protocol suite makes sure each node gets a unique node address ?

- a. ATP
- b. AURP
- c. DDP
- d. RARP
- e. RTMP

ans: C

Q. In appletalk, the network address and the node address are ____ and ____ bits long ?

- a. 4, 12
- b. 4, 16
- c. 6, 16
- d. 8, 12
- e. 8, 16

ans. E

Q. Name the protocol from the appletalk protocol suite that is "roughly" equivalent to "ARP" ?

- a. AURP
- b. ATP
- c. DDP
- d. RARP
- e. RTMP

ans: D

Q. ATP = ?

- a. A protocol that provides guaranteed transaction

services between sockets

- b. A protocol that translates layer 3 addresses to layer 2 addresses
- c. A protocol that translates layer 2 addresses to layer 3 addresses
- d. A protocols that translates between names and layer 3 addresses

ans: A

NOTE: Stands for Appletalk Transaction Protocol

Q. AURP stands for _____ ?

- a. Appletalk Unique Routing Protocol
- b. Appletalk Update-based Routing Protocol
- c. Appletalk Unit Routing Protocol
- d. Appletalk Unit Resolution Protocol

ans: B

Q. DDP stands for _____ ?

- a. Datagram Delivery Protocol
- b. Dedicated Datagram Protocol
- c. Data Delivery Protocol
- d. Datagram Detection Protocol

ans: A

NOTE: Network Layer protocol in the appletalk protocol suit that is responsible for socket to socket delivery of datagrams over an appletalk network.

OBJ. 67. CONFIGURE ZONE FILTERS

Q. 2 ways to configure zone filtering are :

- a. GZI filtering
- b. ZIP replying filtering
- c. GZL filtering
- d. gleaning
- e. ATP filtering

ans: A,B

Q. GetZoneList filters filter between _____ and routers and ZIP replying filters filter between _____ and routers.

- a. routers, clients
- b. sockets, clients
- c. clients, sockets
- d. sockets, routers
- e. clients, routers

ans: E

Q. You have already defined an accesslist (#650) that denies zone named "admin". How do you apply this access-list to an interface as ZIP replying filter ?
(Type the statement; NOT a multiple choice question)

ans: router(config-if)# appletalk zip-reply-filter 650

Q. You have already defined an access-list (#650) that denies zone named "admin". How do you apply this access-list to an interface as a GZL filter ?

- a. router(config-if)# getzonelist-filter 650
- b. router(config-if)# appletalk gzl 650
- c. router(config-if)# appletalk getzonelist-filter 650
- d. router(config-if)# appletalk gzl-group 650

ans: C

Q. You want to know which appletalk zones your router knows about. Which command would you issue ?

- a. sh appletalk zone
- b. sh zones
- c. appletalk zones
- d. appletalk show zones
- e. show ddp zones

ans: A

OBJ. 68. CONFIGURE RTMP FILTERS

Q. RTMP filter controls what _____ info a router advertises.

- a. socket
- b. appletalk zone
- c. cable-range
- d. macip

ans: C

Q. You have defined an access-list (#650) that will filter out cable-ranges 180-182 from the advertisements of your router. You have applied this access-list to an interface with the following command :

```
router(config-if)# appletalk distribute-list 650 in
```

What will this do ?

- a. filter out packets going out to cable-range 180-182
- b. filter out packets coming from cable-range 180-182
- c. filter out routing updates coming from cable-range 180-182
- d. filter out routing updates going to cable-range 180-182

ans: C

Q. You are defining an access-list to filter appletalk traffic. You have defined the following statement so far.

```
access-list 650 deny cable-range 180-182
```

What else do you have to add to this to allow all traffic from all other zones.

- a. nothing
- b. access-list 650 permit additional-zones
- c. access-list 650 permit other-zones
- d. access-list 651 permit additional-zones
- e. access-list 650 permit any any

ans: B

Q. Which command will instruct your router not to send any rtmp packets at all from an interface.

(Type the statement; NOT a multiple choice question)

ans: router(config-if)# no appletalk send rtmps

Q. Name 3 protocols from the appletalk protocol suite that map to the network layer of the OSI model ?

- a. ATP
- b. DDP
- c. DNS
- d. RARP
- e. RTMP

ans: B,D,E

Q. What is the default routing protocol for Appletalk ?

- a. RIP
- b. RTMP
- c. EIGRP
- d. OSPF

ans: B . RTMP is proprietary and it was derived from RIP.

OBJ. 69. CONFIGURE NBP FILTERS

Q. You need to control access to a Mac file server in your appletalk network. What kind of filter would you use ?

- a. zone filter
- b. RTMP filter
- c. NBP filter
- d. Not possible
- e. None of the above

ans: C

Q. Construct an access-list statement that prevents forwarding of NBP packets that come from any LaserWriter printer.

- a. access-list 650 deny nbp 1 type LaserWriter
- b. access-list 550 deny nbp 1 type LaserWriter
- c. access-list 650 deny nbp 1 LaserWriter
- d. access-list 650 deny nbp 1 type Printer
- e. It is not possible to define such specific statement

ans: A

Q. You are configuring an NBP access list. Construct a statement (access-list) that prevents forwarding of all NBP packets that have not not been explicitly permitted in the statements defined beforehand.

(Type the statement. NOT a multiple-choice question)

ans: access-list 650 deny other-nbps

Q. Name the protocol from the appletalk protocol suite that is "roughly" equivalent to DNS ?

- a. AURP

- b. ATP
- c. NBP
- d. RARP
- e. RTMP

ans: C

Q. Name 2 protocols from the appletalk protocol suite that map to the transport layer of the OSI model and above ?

- a. DDP
- b. NBP
- c. RARP
- d. RTMP
- e. ZIP

ans: B,E

OBJ. 70. CONFIGURE CHANNELIZED T1 and E1 CONFIGURATION

Q. Which command will show you whether T1 lines are up, framing in each T1 line, Linecode in each T1 line etc. ?
(Type the command. NOT a multiple-choice question)

ans: show controller t1

Q. What are the available linecode types for E1 ? Choose 2.

- a. AMI
- b. B8ZS
- c. HDB3
- d. crc4
- e. no-crc4

ans: A,C

Q. You have purchased 8 time slots (1,5,15,16,17,18,19,20) for your E1 line. What command would you run when you are configuring the controller interface to reflect this fact. Speed of each channel is 64 Kbps.

- a. router(config-if)# channel-group 1 timeslots 8 1,5,15-20 64
- b. router(config-if)# controller 1 timeslots 8 1,5,15-20 speed 64
- c. router(config-if)# channel-group 1 channel 8 1,5,15-20 speed 64
- d. router(config-if)# channel-group 1 timeslots 8 1,5,15-20 speed 64
- e. router(config-if)# channel-group 1 timeslots 1,5,15-20 speed 64

ans: D

Q. 2 types of Frame Types available when you are configuring T1 are :

- a. Super Frame
- b. crc4
- c. no-crc4
- d. Extended Super Frame
- e. australia

ans: A,D

Q. Your T1 line uses B8ZS linecode. What command would you run to reflect this fact ?

(Type the command. NOT a multiple-choice question)

ans: router(config-if)# linecode b8zs

NOTE: This is to be done on the T1 controller interface.

OBJ. 71. CONFIGURE ISDN PRI CONFIGURATION COMMANDS

(NOTE: see also OBJECTIVE 47 questions)

Q. Which command displays type of isdn switch and layer 1-3 status ?

- a. sh isdn service
- b. show isdn status
- c. sh isdn protocol
- d. sh isdn controller
- e. sh isdn channel

ans: B

Q. What command shows PRI B-channel status ?
(Type the command. NOT a multiple-choice question)

ans: show isdn service

Q. PRI channel 5 map to pri-group timeslot _ ?

- a. 3
- b. 4
- c. 5
- d. 6
- e. 7

ans: D

NOTE: PRI channels 0-23 map to pri-group timeslot 1-24

Q. All B channel in an ISDN PRI interface are automatically bundled into a _____ interface ?

- a. controller
- b. channel
- c. tunnel
- d. dialer
- e. payload

ans: D

Q. To configure a T1-based PRI, one should apply the configuration commands to the PRI D channel, that is, interface _____ ?

- a. serial0
- b. seriald0
- c. serial23
- d. serial24
- e. serial0:23

ans: E

Q. You are using AT&T 5ESS switch for PRI access. Which command would reflect this fact.

- a. router# isdn switch-type primary-5ess
- b. router(config)# isdn switch-type primary-5ess
- c. router(config-if)# isdn switch-type primary-5ess
- d. router(config-if)# isdn switch-type basic-5ess
- e. router(config)# isdn switch-type att-5ess

ans: B

Q. If you are using PRI , what pri-group command must be entered in the "controller T1 0" section ?

- a. router(config-if)# pri-group timeslots 1-24
- b. router(config-if)# pri-group timeslots 0-23
- c. router(config-if)# pri-group time slots 0-23
- d. router(config-if)# pri-group time slots 1-24
- e. router(config)# pri-group timeslots 1-24

ans: A

NOTE: Enable PRI services on Cisco IOS NAS by configuring the T1 controller(s).