CCNA Interviews questions Papers:

Identify the purpose of the Trace command?

\* Explorer packet transmitting routing information

\* Test connectivity

\* Determine the path a packet is taking through the network

\* Transmits user data when buffers are full

Correct answer: C

The trace command is used to determine the path a packet has taken through the network.

Identify the purpose of the TCP 3 step handshake?

\* Setup a un-reliable connection

\* Initialize routing tables

\* Synchronize sequence numbers between hosts

\* Connection tear down process

Correct answer: C

The 3 step handshake establishes the parameters required for a TCP connection. During the handshake process sequence numbers are synchronized allowing for the end points to properly acknowledge and re-assemble the segments.

Identify 2 PPP characteristics?

\* Is proprietary to Cisco

\* Supports authentication

\* Support compression

\* Run on a multi-access network

Correct answer: B C

PPP supports authentication; PAP and CHAP. It also supports compression; Stacker and Predictor.

Which statement is true regarding half duplex?

\* Only works in a point-to-point configuration

\* Allows for transmitting and receiving but not a the same time

\* Allow for transmitting and receiving of data simultaneously

\* Doubles the bandwidth

Correct answer: B

Half duplex is analogous to a single a lane bridge, it can handle traffic in both directions but no at the same time.

Identify the purpose of the wildcard mask?

\* Match a certain portion of the IP address while ignoring the rest of the address

\* Determine the class of the IP address

\* Determine the network portion of an IP address

\* Hide the host portion of an IP address

Correct answer: A

The purpose of the wildcard mask to match a certain portion of the IP address while ignoring the rest.

Identify the OSI layer associated with bits?

\* Physical

\* Network

\* Binary

\* Data link

Correct answer: A

The Physical layer converts the frames to bits.

Identify the type of routing protocol that maintains a topological database of the network?

\* Topological state

\* Shortest Path First

\* Link state

\* Distance vector

Correct answer: C

Link State routing protocols maintain a database that lists all the networks in the internetwork.

Identify the 3 major functions at layer 3 of the OSI model?

\* Forwarding process

\* Logical addressing

\* End-to-end connections

\* Path selection

\* MAC address examination

\* Network monitoring

Correct answer: A B D

Layer 3 determines the path, forwards the packet and implements software or logical addressing.

Identify the 2 rules used when configuring a Distance Vector routing protocol?

\* Physically connected network(s)

\* Configure the classful address, no subnets

\* Enable CDP so neighbors can be detected

\* Configure all networks in Area0

Correct answer: A B

When configuring a Distance Vector routing protocol only assign the physically connected networks with the classful address only.

Identify 3 characteristics of an IP address?

\* Contains a network portion and a host portion

\* 32 bits long

\* Unique to each network

\* Part of the default Cisco configuration

\* Referred to as the hardware address

Correct answer: A B C

An IP address is 32 bits long, it is referred as the logical or software address. It contains a network and host portion. Each IP address is unique.

Identify 3 feature of access-lists?

\* Implicit deny will deny any packets not matched

\* Processed sequentially from bottom to top

\* Processed sequentially from top to bottom

\* If a packet is denied it would be tested against the remaining statements in the access-list

\* Once a match is made the packet is either denied or permitted

\* Enabled on all interfaces by default

Correct answer: A C E

Access-list are processed from top to bottom, once a match occurs the packet is either denied or permitted and is no longer tested and if no match occurs the packet is denied via the implicit deny.

Which OSI layer performs code conversion, code formatting and encryption?

\* Physical

\* Data-Link

\* Application

\* Transport

\* Presentation

\* Network

Correct answer: E

Layer 6 the Presentation layers performs this function.

Identify the 3 methods routers learn paths to destinations?

\* Dynamic routing

\* None of the above, configured by default

\* Default routes

\* Administrative distance

\* Static routes

Correct answer: A C E

Routers can learn paths via 3 different sources; static routes, dynamic routing protocols (i.e. RIP) and default routes.

Identify the purpose of the following command ‘ip route 192.168.100.0 255.255.255.0 10.1.0.1′

\* Enabling a dynamic routing protocol

\* Creating a static route to the 10.1.0.0 network

\* Teaches the router about the distant network 192.168.100.0 and how it can be reached via 10.1.0.1

\* Assigning the IP address 192.168.100.0 to an interface

Correct answer: C

A static routes teaches the router about a distant network and the next hop to reach that network. Command syntax:

ip route network-address subnet-mask next-hop-address

Based upon the 1st octet rule identify the range for a Class A address?

\* 1 - 126

\* 192 - 223

\* 128 - 191

\* 1 - 191

Correct answer: A

Class A address has the 1st octet between 1 - 126. Class B between 128 - 191 and Class C between 192 - 223.

What does a Standard IP Access-list use as test criteria?

\* IP source address

\* IP source and destination address, protocol numbers and port numbers

\* IPX source and destination address

\* Source MAC address

Correct answer: A

Standard IP access list use only source address.

What is the function of the Transport layer and which protocols reside there?

\* MAC addressing - IP

\* Interhost communication - SQL, NFS

\* Best effort Packet delivery - TCP, UDP

\* End-to-end connections - TCP, UDP

Correct answer: D

Layer 4, the Transport layer, is responsible for end-to-end connections. The two TCP/IP protocols that reside there are TCP and UDP.

Identify the 3 Internet layer IP protocols?

\* NetBios

\* IPX

\* ARP

\* IP

\* RARP

Correct answer: C D E

NetBios and IPX are not layer 3 IP protocols. IP - Internet Protocol, ARP - Address Resolution Protocol and RARP - Reverse Address Resolution Protocol.

IPX routing updates occur how often?

\* Every 30 seconds

\* Every 60 seconds

\* Only as needed

\* When the remote router asks for an update

Correct answer: B

IPX RIP updates are exchanged every 60 seconds.

Identify 3 methods not used to prevent routing loops?

\* Holddown timers

\* Sequence numbers

\* Triggered updates

\* Split horizon

\* Area hierarchies

\* Order of router startup

Correct answer: B E F

Area hierarchies, sequence numbers and order of router startup all relate to Link State routing protocols which do NOT incur routing loops.

Identify the hardware component that stores the bootstrap program?

\* ROM

\* NVRAM

\* Booter load

\* RAM

\* Flash

Correct answer: A

ROM contains the boot strap code.

Which OSI layer provides mechanical, electrical, procedural for activating, maintaining physical link?

\* Presentation

\* Network

\* Application

\* Physical

\* Transport

\* Data-Link

Correct answer: D

Layer 1 the Physical layer performs this function.

Identify 2 characteristics of PPP?

\* Uses LLC to establish the link

\* Default serial encapsulation

\* Support multiple layer 3 protocols

\* Offers two types of authentication; PAP and CHAP

Correct answer: C D

PPP is not the default encapsulation and uses LCP not LLC to establish the link. It support multiple layer 3 protocols and supports authentication.

Identify 3 characteristics of a connection oriented protocol?

\* Path determination

\* Flow control

\* Acknowledgements

\* Uses hop count as metric

\* 3 step handshake

Correct answer: B C E

Connection oriented protocols must first establish the connection (3 step handshake), employ methods to acknowledge the receipt of data (acknowledgements) and slow down the flow of data if required (flow control).

What is the maximum hop count for IP RIP?

\* Infinity

\* 16

\* 15

\* 1

Correct answer: C

is the maximum hop count, underscoring the size limitation of RIP.

What is Cisco’s default encapsulation method on serial interfaces?

\* ANSI

\* Cisco

\* Q933a

\* HDLC

Correct answer: D

Cisco’s implementation of HDLC is only compatible with Cisco routers. It is the default encapsulation type for serial interfaces.

Which of the following is a characteristic of a switch, but not of a repeater?

\* Switches forward packets based on the IPX or IP address in the frame

\* Switches forward packets based on the IP address in the frame

\* Switches forward packets based on the MAC address in the frame

\* Switches forward packets based only on the IP address in the packet

Correct answer: C

A repeater regenerates the signal it receives, a switch makes decisions based upon MAC addresses to determine whether a frame should be forwarded. Repeaters forward all packets.

Ping uses which Internet layer protocol?

\* RARP

\* ICMP

\* ARP

\* FTP

Correct answer: B

Internet Control Message Protocol - ICMP is a management protocol and messaging service provider for IP. Its messages are carried as IP datagrams.

ICMP is used in the following events:

Destination Unreachable - If a router cannot send an IP packet any further, it uses an ICMP echo to send a message back to the sender notifying it that the remote node is unreachable.

Buffer Full - If a routers memory buffer is full ICMP will send out a message to the originator.

Hops - Each IP datagram is assigned a path. This consists of hops. If it goes through the maximum number of hops, the packet is discarded and the discarding router sends an ICMP echo to the host.

Ping - Ping use ICMP echo message to check connectivity.

Which is true regarding store-and-forward switching method?

\* Latency varies depending on frame-length

\* Latency is constant

\* It is default for all Cisco switches

\* It only reads the destination hardware address before forwarding the frame

Correct answer: A

Store-and-Forward switching copies the entire frame into its buffer and computes the CRC. If a CRC error is detected, the frame is discarded, or if the frame is a runt (less than 64 bytes including the CRC) or a giant (more than 1518 bytes including the CRC). The LAN switch then looks up the destination address in its switching table and determines the outgoing interface. The frame is then forwarded to the outgoing interface. Cisco Catalyst 5000 switches uses the Store-and-Forward method. The problem with Store-and-Forward switching is latency is increased. Latency also varies with the size of the frame. The larger the frame, the more latency associated. This of course is due to the fact that the entire frame is copied into its buffer before being forwarded.