



What are proprietary protocols? **protocols developed by organizations who have control over their definition and operation**

What are the three parts of an IPv6 global unicast address? (Choose three.) **subnet ID/global routing prefix/interface ID**

What are the two most effective ways to defend against malware? **Update the operating system and other application software. Install and update antivirus software.**

What are two characteristics of IP? (Choose two.) **Does not require a dedicated end-to-end connection/operates independently of the network media**

What are two characteristics shared by TCP and UDP? (Choose two.) **port numbering/use of checksum**

What are two common causes of signal degradation when using UTP cabling? (Choose two.) **Improper termination / low-quality cable or connectors**

What are two features of ARP? (Choose two.) **If a host is ready to send a packet to a local destination device and it has the IP address but not the MAC address of the destination, it generates an ARP broadcast. / If a device receiving an ARP request has the destination IP/v4 address, it responds with an ARP reply.**

What are two functions that are provided by the network? **directing data packets to destination hosts on other networks / providing end devices with a unique network identifier**

What are two problems that can be caused by a large number of ARP request and reply messages? (Choose two.) **The ARP request is sent as a broadcast, and will flood the entire subnet. All ARP request messages must be processed by all nodes on the local network.**

What attribute of a NIC would place it at the data link layer of the OSI model? **MAC address**

What characteristic describes a DOS attack? **an attack that slows or crashes a device or network service**

What characteristic describes a Trojan horse? **malicious software or code running on an end device**

What characteristic describes a virus? **malicious software or code running on an end device**

What characteristic describes a VPN? **a tunneling protocol that provides remote users with secure access into the network of an organization**

What characteristic describes adware? **software that is installed on a user device and collects information about the user**

What characteristic describes an IPS? **a network device that filters access and traffic coming into a network**

What characteristic describes anti-spyware? **applications that protect end devices from becoming infected with malicious software**

What characteristic describes antivirus software? **applications that protect end devices from becoming infected with malicious software**

What mechanism is used by a router to prevent a received IPv4 packet from traveling endlessly on a network? **It decrements the value of the TTL field by 1 and if the result is 0, it discards the packet and sends a Time Exceeded message to the source host.**

What characteristic describes identity theft? **the use of stolen credentials to access private data**

What characteristic describes spyware? **software that is installed on a user device and collects information about the user**

What does the term "attenuation" mean in data communication? **loss of signal strength as distance increases**

What happens when the transport input ssh command is entered on the switch? **XY lines? Communication between the switch and remote users is encrypted.**

What is a benefit of using cloud computing in a network? **capabilities are extended without requiring investment in new infrastructure, personnel, or software.**

Which two statements are correct about MAC and IP? **Destination IP addresses in a packet header remain constant along the entire path to a target host. Destination and source MAC addresses have local significance and change every time a frame goes from one LAN to another.**

What is a function of the data link layer? **provides for the exchange of frames over a common local media**

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What is an advantage for small organizations of adopting IMAP instead of POP? **Messages are kept in the mail servers until they are manually deleted from the email client.**

What is an advantage to using a protocol? **It encourages competition and promotes choices.**

What is one main characteristic of the data link layer? **It shields the upper layer protocol from being aware of the physical medium to be used in the communication.**

What are three characteristics of the CSMA/CD process? **A device listens and waits until the media is not busy before transmitting. / After detecting a collision, hosts can attempt to resume transmission after a random time delay has expired. / All of the devices on a segment see data that passes on the network medium.**

What is the consequence of configuring a router with the ipv6 unicast-? **The IPv6 enabled router interfaces begin sending ICMPv6 Router Advertisement messages.**

What is the subnet ID associated with the IPv6 address 2001:DA48:FC5:A4:3D1B::164? **2001:DA48:FC5:A4::/64**

What method is used to manage contention-based access on a wireless network? **CSMA/CA**

What service is provided by BOOTP? **Legacy application that enables a diskless workstation to discover its own IP address and find a BOOTP server on the network.**

What service is provided by DHCP? **Dynamically assigns IP addresses to end and intermediary devices.**

What service is provided by DNS? **Resolves domain names, such as cisco.com, into IP addresses.**

What service is provided by FTP? **Allows for data transfers between a client and a file server.**

What service is provided by HTTP? **A basic set of rules for exchanging text, graphic images, sound, video, and other multimedia files on the web.**

What service is provided by HTTPS? **Uses encryption to secure the exchange of text, graphic images, sound, and video on the web.**

What service is provided by Internet Messenger? **An application that allows real-time chatting among remote users.**

What service is provided by POP3? **Retrieves email from the server by downloading the email to the local mail application of the client.**

What service is provided by SMTP? **Allows clients to send email to a mail server and the servers to send email to other servers.**

What subnet mask is needed if an IPv4 network has 40? **255.255.255.192**

What technique is used with UTP cable to help protect against signal interference from crosstalk? **twisting the wires together into pairs**

What are the requirements are defined by the protocols used in network communications to allow message? **message size/message encoding/delivery options**

What two ICMPv6 message types must be permitted through IPv6 access control lists neighbor solicitation/neighbor advertisements

What two pieces of information are displayed in the output of the show ip interface brief command? **IP addresses/ Layer 1 statuses**

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What two security solutions are most likely to be used only in a corporate environment? (Choose two.) **virtual private networks/intrusion prevention systems**

What will happen if the default gateway address is incorrectly configured on a host? **The host cannot communicate with hosts in other networks.**

What would be the interface ID of an IPv6 enabled interface with a MAC address of 1C-6F-65-C2-BD-F8 when the interface ID is? **E6F:65FF:FE02:BD:F8**

When a switch configuration includes a user-defined error threshold on a per-port basis, to which switching method will the switch revert? **store-and-forward**

Which frame field is created by a source node and used by a destination node to ensure that a transmitted data signal has not been? **frame check sequence field**

Which information does the show startup-config command display? **The contents of the saved configuration file in the NVRAM**

Which layer of the TCP/IP model provides a route to forward messages through an internetwork? **Internet**

Which range of link-local addresses can be assigned to an IPv6-enabled interface? **FE80::/10**

Which scenario describes a function provided by the transport layer? **A student has two web browser windows open in order to access two web sites. The transport layer ensures the correct web page is delivered to the correct browser window.**

Which subnet would include the address 192.168.1.96 as a usable host address? **192.168.1.64/26**

Which switching method drops frames that fail the FCS check? **store-and-forward switching**

Which three layers of the OSI model map to the application layer of the TCP/IP model? (Choose three.) **application/session/presentation**

Which two commands can be used on a Windows host to display the routing table? **printnetstat -r**

Which two functions are performed at the LLC sublayer of the OSI Data Link Layer to facilitate Ethernet communication? (Choose two.) **enables IPv4 and IPv6 to utilize the same physical medium/places information in the Ethernet frame that identifies which network layer protocol is being encapsulated by the frame**

Which two protocols operate at the top layer of the TCP/IP protocol suite? (Choose two.) **POP/DNS**

Which two statements accurately describe an advantage or a disadvantage when deploying NAT for IPv4 in a network? (Choose two.) **NAT introduces problems for some applications that require end-to-end connectivity. NAT provides a solution to slow down the IPv4 address depletion.**

Which two statements are correct in a comparison of IPv4 and IPv6 packet headers? **The Source Address field name from IPv4 is kept in IPv6. The Time-to-Live field from IPv4 has been replaced by the Hop Limit field in IPv6**

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Which two statements describe features of an IPv4 routing table on a router? **It stores information about routes derived from the active router interfaces. If a default static route is configured in the router, an entry will be included in the routing table with source code S.**

Which two statements describe how to assess traffic flow patterns and network traffic types using a protocol analyzer? (Choose two.) **Capture traffic during peak utilization times to get a good representation of the different traffic types. Perform the capture on different network segments.**

Which two traffic types use the Real-Time Transport Protocol (RTP)? (Choose two.) **video/voice**

Which type of security threat would be responsible if a spreadsheet add-on disables the local software firewall? **Trojan horse**

Which type of server relies on record types such as A, NS, AAAA, and MX in order to provide services? **DNS**

Which value, that is contained in an IPv4 header field? **Time-to-Live**

Which wireless technology has low-power and data rate requirements making it popular in home automation applications? **ZigBee**

Which wireless technology has low-power and low-data rate requirements making it popular in IoT environments? **ZigBee**

Why would a Layer 2 switch need an IP address? **To enable the switch to be managed remotely**