1. **What is the function of the kernel of an operating software?**
   * It provides a user interface that allows users to request a specific task.
   * The kernel links the hardware drivers with the underlying electronics of a computer.
   * It is an application that allows the initial configuration of a device.
   * The kernel provisions hardware resources to meet software requirements.
2. **A network administrator needs to keep the user ID, password, and session contents private when establishing remote CLI connectivity with a switch to manage it. Which access method should be chosen?**
   * Telnet
   * Console
   * AUX
   * SSH
3. **Which procedure is used to access a 2960 switch when performing an initial configuration in a secure environment?**
   * Use Telnet to remotely access the switch through the network.
   * Use the console port to locally access the switch from a serial or USB interface of the PC.
   * Use Secure Shell to remotely access the switch through the network.
   * Use the AUX port to locally access the switch from a serial or USB interface of the PC.
4. **Which command or key combination allows a user to return to the previous level in the command hierarchy?**
   * end
   * exit
   * Ctrl-Z
   * Ctrl-C
5. **A router has a valid operating system and a configuration file stored in NVRAM. The configuration file contains an enable secret password but no console password. When the router boots up, which mode will display?**
   * global configuration mode
   * setup mode
   * privileged EXEC mode
   * user EXEC mode
6. **Which two functions are provided to users by the context-sensitive help feature of the IOS CLI? (Choose two.)**
   * providing an error message when a wrong command is submitted
   * displaying a list of all available commands within the current mode
   * allowing the user to complete the remainder of an abbreviated command with the TAB key
   * determining which option, keyword, or argument is available for the entered command
   * selecting the best command to accomplish a task
7. **Which information does the show startup-config command display?**
   * the IOS image copied into RAM
   * the bootstrap program in the ROM
   * the contents of the current running configuration file in the RAM
   * the contents of the saved configuration file in the NVRAM
8. **Why is it important to configure a hostname on a device?**
   * a router or switch only begins to operate when its hostname is set
   * a hostname must be configured before any other parameters
   * to identify the device during remote access (SSH or telnet)
   * to allow local access to the device through the console port
9. **Which two host names follow the guidelines for naming conventions on IOS devices? (Choose two.)**
   * Branch2!
   * RM-3-Switch-2A4
   * Floor(15)
   * HO Floor 17
   * SwBranch799
10. **How does the service password-encryption command enhance password security on routers and switches?**
    * It encrypts passwords as they are sent across the network.
    * It encrypts passwords that are stored in router or switch configuration files.
    * It requires that a user type encrypted passwords to gain console access to a router or switch.
    * It requires encrypted passwords to be used when connecting remotely to a router or switch with Telnet.

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**1. A computer in a given network is communicating with a specific group of computers. What type of communication is this?**

* broadcast
* multicast
* unicast
* ARP
* HTTP

**2. What method can be used by two computers to ensure that packets are not dropped because too much data is being sent too quickly?**

* encapsulation
* flow control
* access method
* response timeout

**3. Which protocol is responsible for controlling the size and rate of the HTTP messages exchanged between server and client?**

* HTTP
* ARP
* TCP
* DHCP

**4. A user is viewing an HTML document located on a web server. What protocol segments the messages and manages the segments in the individual conversation between the web server and the web client?**

* DHCP
* TCP
* HTTP
* ARP

**5. A web client is sending a request for a webpage to a web server. From the perspective of the client, what is the correct order of the protocol stack that is used to prepare the request for transmission?**

* HTTP, IP, TCP, Ethernet
* HTTP, TCP, IP, Ethernet
* Ethernet, TCP, IP, HTTP
* Ethernet, IP, TCP, HTTP

**6. What are proprietary protocols?**

* protocols developed by private organizations to operate on any vendor hardware
* protocols that can be freely used by any organization or vendor
* protocols developed by organizations who have control over their definition and operation
* a collection of protocols known as the TCP/IP protocol suite

**7. Which IEEE standard enables a wireless NIC to connect to a wireless AP that is made by a different manufacturer?**

* 802.1
* 802.11
* 802.3
* 802.2

**8. What is an advantage of network devices using open standard protocols?**

* Network communications is confined to data transfers between devices from the same vendor.
* A client host and a server running different operating systems can successfully exchange data.
* Internet access can be controlled by a single ISP in each market.
* Competition and innovation are limited to specific types of products.

**9. What is a function of Layer 4 of the OSI model?**

* to specify the packet type to be used by the communications
* to apply framing information to the packet, based on the attached media
* to represent data to the user, including encoding and dialog control
* to describe the ordered and reliable delivery of data between source and destination

**10. Which statement is true about the TCP/IP and OSI models?**

* The TCP/IP transport layer and OSI Layer 4 provide similar services and functions.
* The TCP/IP network access layer has similar functions to the OSI network layer.
* The OSI Layer 7 and the TCP/IP application layer provide identical functions.
* The first three OSI layers describe general services that are also provided by the TCP/IP internet layer.

**11. What is a benefit of using a layered model for network communications?**

* fostering competition among device and software vendors by enforcing the compatibility of their products
* enhancing network transmission performance by defining targets for each layer
* avoiding possible incompatibility issues by using a common set of developing tools
* simplifying protocol development by limiting every layer to one function

**12. What is the general term that is used to describe a piece of data at any layer of a networking model?**

* frame
* packet
* protocol data unit
* segment

**13. Which PDU format is used when bits are received from the network medium by the NIC of a host?**

* file
* frame
* packet
* segment

**14. At which layer of the OSI model would a logical address be encapsulated?**

* physical layer
* data link layer
* network layer
* transport layer

**15. Which statement accurately describes a TCP/IP encapsulation process when a PC is sending data to the network?**

* Data is sent from the internet layer to the network access layer.
* Packets are sent from the network access layer to the transport layer.
* Segments are sent from the transport layer to the internet layer.
* Frames are sent from the network access layer to the internet layer.

**16. What statement describes the function of the Address Resolution Protocol?**

* ARP is used to discover the IP address of any host on a different network.
* ARP is used to discover the IP address of any host on the local network.
* ARP is used to discover the MAC address of any host on a different network.
* ARP is used to discover the MAC address of any host on the local network.

**17. Which address provides a unique host address for data communications at the internet layer?**

* data-link address
* logical address
* Layer 2 address
* physical address

**18. Which address does a NIC use when deciding whether to accept a frame?**

* source IP address
* source MAC address
* destination IP address
* destination MAC address
* source Ethernet address

**19. Which protocol is used by a computer to find the MAC address of the default gateway on an Ethernet network?**

* ARP
* TCP
* UDP
* DHCP

**20. If the default gateway is configured incorrectly on the host, what is the impact on communications?**

* The host is unable to communicate on the local network.
* The host can communicate with other hosts on the local network, but is unable to communicate with hosts on remote networks.
* The host can communicate with other hosts on remote networks, but is unable to communicate with hosts on the local network.
* There is no impact on communications.