1. A networking technician is working on the wireless network at a medical clinic. The technician accidentally sets up the wireless network so that patients can see the medical records data of other patients. Which of the four network characteristics has been violated in this situation?
   1. fault tolerance
   2. scalability
   3. security
   4. Quality of Service (QoS)
   5. reliability
2. How many host addresses are available on the 192.168.10.128/26 network?
   1. 30
   2. 32
   3. 60
   4. 62
   5. 64
3. Which statement describes a MAC address?
   1. It is 128-bits in length.
   2. It contains two portions, the network portion and the host portion.
   3. It is a physical address assigned to an Ethernet NIC by the manufacturer.
   4. It identifies the source and destination addresses of hosts on the Internet.
4. Which three devices are considered intermediate devices in a network? (Choose three.)
   1. router
   2. server
   3. switch
   4. workstation
   5. network printer
   6. wireless access point
5. What is the equivalent decimal value given a binary number of 11001010?
   1. 196
   2. 202
   3. 212
   4. 240
6. What is the protocol that is used to discover a physical address from a known logical address and what message type does it use?
   1. ARP, multicast
   2. Ping, unicast
   3. DNS, broadcast
   4. ARP, broadcast
7. A user is implementing security on a small office network. Which two actions would provide the minimum-security requirements for this network? (Choose two.)
   1. implementing a firewall
   2. installing a wireless network
   3. installing antivirus software
   4. implementing an intrusion detection system
   5. adding a dedicated intrusion prevention device

8. What function does pressing the Tab key have when entering a command in IOS?
    1. It aborts the current command and returns to configuration mode.
    2. It exits configuration mode and returns to user EXEC mode.
    3. It moves the cursor to the beginning of the next line.
    4. It completes the remainder of a partially typed word in a command.
9. What is the purpose of ICMP messages?
    1. to inform routers about network topology changes
    2. To ensure the delivery of an IP packet
    3. to provide feedback of IP packet transmissions
    4. to monitor the process of a domain name to IP address resolution
10. Which layer in the TCP/IP model is used for formatting, compressing, and encrypting data?
    1. Internetwork
    2. Session
    3. Presentation
    4. Application
    5. network access
11. The network layer concerns with
    1. bits
    2. frames
    3. packets
    4. none of the mentioned
12. Which two traffic types require delay sensitive delivery? (Choose two.)
    1. email
    2. web
    3. FTP
    4. voice
    5. video
13. What will happen if the default gateway address is incorrectly configured on a host?
    1. The host cannot communicate with other hosts in the local network.
    2. The switch will not forward packets initiated by the host.
    3. The host will have to use ARP to determine the correct address of the default gateway.
    4. The host cannot communicate with hosts in other networks.
    5. A ping from the host to 127.0.0.1 would not be successful.
14. What is the complete range of TCP and UDP well-known ports?
    1. 0 to 255
    2. 0 to 1023
    3. 256 – 1023
    4. 1024 – 49151
15. At which OSI layer is a destination MAC address added to a PDU during the encapsulation process?
    1. data link layer
    2. transport layer
    3. application layer
    4. network layer

16. What term describes a computing model where server software runs on dedicated computers?
    1. client/server
    2. internet
    3. intranet
    4. extranet
17. What process is used to place one message inside another message for transfer from the source to the destination?
    1. access control
    2. decoding
    3. encapsulation
    4. flow control
18. What is an ISP?
    5. It is a standards body that develops cabling and wiring standards for networking.
    6. It is a protocol that establishes how computers within a local network communicate.
    7. It is an organization that enables individuals and businesses to connect to the Internet.
    8. It is a networking device that combines the functionality of several different networking devices in one.
20. You have been asked to create a subnet that supports 16 hosts. What subnet mask should you use?
    1. 255.255.255.252
    2. 255.255.255.248
    3. 255.255.255.240
    4. 255.255.255.224
21. What three application layer protocols are parts of the TCP/IP protocol suite? (Choose three.)
    1. ARP
    2. DHCP
    3. DNS
    4. FTP
    5. NAT
    6. PPP
22. Which wireless technology is used on smart phones to transmit data to another device within only very close proximity?
    1. NFC
    2. Wi-Fi
    3. 3G/4G
    4. Bluetooth
23. When a host sends a packet, how does it determine if the destination of the packet is on the same local network or on a remote network?
    1. It checks to see if the default gateway is configured.
    2. It compares the source and destination MAC addresses.
    3. It queries the DNS server with the destination IP address.
    4. It uses the subnet mask to compare the source and destination IP address.

24. A user types www.cisco.com into a web browser to visit the corporate website. Which service will resolve the domain name to an associated IP address?
    1. FTP
    2. DNS
    3. DHCP
    4. SMTP

25. Which transport layer protocol provides best effort delivery without guaranteeing that packets arrive at the destination?
    1. SSH
    2. TCP
    3. UDP
    4. HTTP

26. The current IP configuration of a small company is done manually and is time-consuming. Because of increased network growth, a technician needs a simpler way for IP configuration of workstations. Which service would simplify the workstation IP configuration task?
    1. APIPA
    2. DHCP
    3. DIPS
    4. ICMP

27. A teacher is having difficulties connecting his PC to the classroom network. He needs to verify that a default gateway is configured correctly. What is the best command to use to accomplish the task?
    1. ipconfig
    2. copy running-config startup-config
    3. show interfaces
    4. show ip nat translations

28. A client packet is received by a server. The packet has a destination port number of 53. What service is the client requesting?
    1. DNS
    2. NetBIOS (NetBT)
    3. POP3
    4. IMAP

29. What method can be used by two computers to ensure that packets are not dropped because too much data is being sent too quickly?
   1. encapsulation
   2. flow control
   3. access method
   4. response timeout

30. During a routine inspection, a technician discovered that software that was installed on a computer was secretly collecting data about websites that were visited by users of the computer. Which type of threat is affecting this computer?
   1. DoS attack
   2. identity theft
   3. spyware
   4. zero-day attack

31. Which three configuration components are required to allow a host to communicate with other hosts on remote networks? (Choose three.)
   1. IP address
   2. DNS server
   3. subnet mask
   4. domain name
   5. default gateway
   6. DHCP server address

32. What is a result when the DHCP servers are not operational in a network?
   1. Workstations are assigned with the IP address 127.0.0.1.
   2. Workstations are assigned with IP addresses in the 10.0.0.0/8 network.
   3. Workstations are assigned with IP addresses in the 169.254.0.0/16 network.
   4. Workstations are assigned with the IP address 0.0.0.0.

33. A network administrator is upgrading a small business network to give high priority to real-time applications traffic. What two types of network services is the network administrator trying to accommodate? (Choose two.)
   1. voice
   2. video
   3. instant messaging
   4. FTP
   5. SNMP

34. A user needs to connect to Cisco.com but does not know the IP address for this website. What type of server will translate the website name into an IP address?
   1. DNS server
   2. web server
   3. proxy server
   4. FTP server

35. Which three devices are considered intermediate devices in a network? (Choose three.)
   1. router
   2. server
   3. switch
   4. workstation
   5. network printer
   6. wireless access point

36. Two students are working on a network design project. One student is doing the drawing, while the other student is writing the proposal. The drawing is finished and the student wants to share the folder that contains the drawing so that the other student can access the file and copy it to a USB drive. Which networking model is being used?
   1. peer-to-peer
   2. client-based
   3. master-slave
   4. point-to-point

37. A PC is not able to connect to a wired network. Pinging the loopback address is successful, but the gateway cannot be reached. On the network switch all the interface lights are on, except for the interface connected to the PC. The LED on the network card is off. What is the most likely cause of this problem?
   1. The gateway needs to be fixed.
   2. The network cable is faulty.
   3. The PC has an incorrect IP address for the DNS server.
   4. The network switch is faulty.