1. Which address is used to identify the sender and receiver in an IP packet header?
   1. domain name
   2. symbolic name
   3. numeric IP
   4. return
2. Which of the following is an 8-bit number that denotes various portions of an IPv4 address?
   1. byte
   2. dotted decimal
   3. octet
   4. bit string
3. Which of the following terms is a synonym for a physical numeric address?
   1. hardware address
   2. MAC layer address
   3. PROM address
   4. RIPL address
4. Which of the following protocols translates a numeric IP address to a physical numeric address?
   1. ICMP
   2. IP
   3. ARP
   4. RARP
5. Which of the following types of IPv4 addresses includes the most host addresses?
   1. Class A
   2. Class B
   3. Class C
   4. Class D
   5. Class E
6. Which of the following address types are supported by IPv6? (Choose all that apply.)
   1. anycast
   2. broadcast
   3. multicast
   4. unicast
7. How large is the IPv6 address space?
   1. 32 bits
   2. 64 bits
   3. 128 bits
   4. 256 bits
8. A Class A network address of 12.0.0.0 is written as 12.0.0.0/8 in prefix notation. True or false?
9. Zero compression is a method that allows a word containing contiguous zeros in an IPv6 address to be replaced by double colons. True or false?
10. Which of the following address types are used for local network communications in IPv6? (Choose all that apply.) a. link-layer b. link-local c. local-use d. site-local
11. Which of the following IPv6 addresses are the same based on the correct use of zero compression? (Choose all that apply.)
    1. fe80::2d57:c4f8::80d7
    2. fe80:0000:2d57:c4f8:0000:80d7
    3. fe8::2d57:c4f8::8d7
    4. fe80:0:2d57:c4f8:0:80d7
12. Which of the following represents an improvement of IPv6 over IPv4? (Choose all that apply.)
    1. larger address space
    2. better security
    3. improved broadcast support
    4. better support for mobile IP
13. A default gateway is.
    1. any IP router
    2. an IP router attached to the Internet
    3. an IP configuration element that names the router/gateway for a particular subnet
    4. an IP configuration element that names the boundary router to the Internet
14. IPv6 requires each device on the network to have its own unique address or identifier, with one exception:
    1. Mobile devices may use multiple identifiers because they frequently move from one network zone to the next.
    2. A host with multiple interfaces providing dynamic load balancing can use a single identifier for all interfaces.
    3. Network devices in a multicast group all use a single, unique identifier for their interfaces.
    4. Multiple devices on a local network may share the same anycast identifier.
15. Native IPv6 addresses in a URL use which of the following characters to enclose the literal IPv6 address, according to RFC 2732 and later by 3986?
    1. two colons
    2. two braces
    3. two brackets
    4. two forward slashes
16. Which RFC originally proposed CIDR?
    1. 1519
    2. 1878
    3. 1918
    4. 2700
17. The loopback address for a network interface using IPv4 is 127.0.0.1 and lets the computer user test the interface. What is the loopback address using IPv6?
    1. 1
    2. : :1
    3. : :1: :1
    4. :1:
18. The first byte or 8 bits of an IPv6 multicast address must be set to which of the following values?
    1. 0000
    2. 1111
    3. 1010
    4. ffff
19. An IPv6 unicast address is made up of which of the following?
    1. a 32-bit interface ID and a 96-bit network portion
    2. a 64-bit interface ID and a 64-bit network portion
    3. a 96-bit interface ID and a 32-bit network portion
    4. a 64-bit interface ID, a 32-bit network portion, and a 32-bit broadcast address
20. For an IPv6 aggregatable global unicast address, the FP or Format Prefix field contains how many bits in the identifier?
    1. 3
    2. 8
    3. 13
    4. 24
21. For an IPv6 multicast address, how many bits are assigned to the group ID?
    1. 32
    2. 64
    3. 96
    4. 112
22. To which of the following limitations are private IP addresses subject to? (Choose all that apply.)
    1. may not be routed on the Internet
    2. may not be used without permission from ICANN or an ISP
    3. will not work with NAT software
    4. may not work with protocols that require secure end-to-end connections
23. Which kinds of devices require public IP addresses? (Choose all that apply.)
    1. any device attached directly to the Internet
    2. any server whose services should be available to the Internet
    3. every client on an internal network
    4. every server on an internal network
24. Which of the following services perform address hiding? (Choose all that apply.)
    1. e-mail
    2. FTP
    3. NAT
    4. proxy
25. What does IPv4 renumbering involve?
    1. assigning new IP addresses to all boundary devices
    2. assigning new IP addresses to all routers
    3. assigning new IP addresses to all servers and routers
    4. assigning new IP addresses to all network interfaces