

Networking midterm

1. A protocol is a set of conventionally agreed rules that specify how data is to be exchanged between pairs of programs or devices.
 - a. true
 - b. false
2. The primary function of the Internet Protocol (IP) is to guarantee reliability of the transfer of data across multiple networks.
 - a. true
 - b. false
3. A router is a computing device belonging to (at least) two networks that transmits onto one of them data received from the other.
 - a. true
 - b. false
4. A characteristic of the layered protocol architecture is that software at each layer augments what it receives for transmittal from the layer above with control headers, then presents the result in turn for transmittal to the layer below.
 - a. true
 - b. false
5. As a data unit moves up from one protocol layer to another, control headers are:
 - a. removed
 - b. rewritten
 - c. interchanged
 - d. added
6. Which of the following is an application layer program designed to run on top of TCP:
 - a. TELNET
 - b. Simple Mail Transfer Program (SMTP)
 - c. File Transfer Protocol (FTP)
 - d. all of the above
7. Which of the following terms is used to denote units of data being transmitted:
 - a. frame
 - b. datagram
 - c. segment
 - d. all of the above
 - e.

8. In a layered protocol architecture, a benefit and rationale for a module at one layer relying on another module at the layer below for some service is:
- a. the higher-layer module can dispense with coding the logic for that service
 - b. the lower-layer module can extend its service to multiple modules at the higher layer
 - c. if called for, transparent to the higher-layer module, the lower-layer module can be replaced.
 - d. all of the above
9. Which of the following is a transport layer protocol:
- a. ethernet
 - b. http
 - c. IP
 - d. none of the above
10. Which of the following is a data link layer protocol:
- a. ethernet
 - b. telnet
 - c. IP
 - d. none of the above
11. Protocols at the network layer, like IP, enable a data unit to traverse how many networks:
- a. 1
 - b. 2
 - c. 1 or 2
 - d. any number
12. Which of the following is defined as a system or set of connected physical networks configured to pass traffic among any computers attached to networks in the set?
- a. an intranet
 - b. an internet or internetwork
 - c. the Internet
 - d. a metropolitan area network
13. Which of the following describes the rules that govern network communication?
- a. protocol
 - b. network operating system
 - c. network medium
 - d. client/server relationship

14. The primary reason for installing a network is sharing resources and information.
- true
 - false
15. Centralized management of resources is one advantage of peer-to-peer networks.
- true
 - false
16. A network's _____ describes its physical layout.
- protocol
 - setup
 - topology
 - server
17. When data is sent across a bus network, how many computers receive the signal?
- all
 - one
 - none
 - ten
18. When the NIC receives data from the CPU, it packages the data into _____ for transmission across the network.
- chips
 - buckets
 - slots
 - Frames
19. Which of the following is not a legal subnet mask?
- 255.0.0.0
 - 255.255.0.0
 - 254.0.0.0
 - None of the masks given is illegal
20. A "Private IP" means an internet address that
- has been assigned to a private organization (e.g., .com) as opposed to a public or governmental one (e.g., .edu or .gov)
 - has been internally assigned within an organization by its own administrators, via subnetting
 - is withheld from assignment for internet usage, so is assigned to nobody there
 - can be utilized on the internet by anybody at their own discretion without being assigned at all

21. A packet is directed to the web server running on 198.147.67.242. That address is located in the packet's
- ethernet header
 - IP header
 - TCP header
 - HTTP header
22. The Address Resolution Protocol (ARP)
- ensures reassembly of fragmented ethernet packets
 - is unnecessary in a Token Ring network
 - is the underlying protocol for domain name resolution
 - determines the IP address for a given ethernet address
23. Which layer of the OSI model is only able to communicate with a single other layer?
- Data Link
 - Physical
 - Session
 - Transport
24. Which layer is responsible for converting bits into signals for outgoing messages, and signals into bits for incoming ones?
- Physical
 - Network
 - Transport
 - Session
25. Each layer (other than those at the very top or bottom) is capable of providing support for the layer above it and is able to perform its own activities based on aid from the layer below it.
- true
 - false
26. Which of the following is not part of a packet's basic structure?
- header
 - sequencer
 - trailer
 - data
27. Which of the following protocols is used by TCP/IP to send control messages?
- TCP
 - ARP
 - RIP
 - ICMP

28. TCP/IP's ARP is responsible for association between hardware- and logical- addresses.

- a. true
- b. false

29. An IP addresses' subnet mask defines which bits in the address represent the network ID and which bits represent the host ID.

- a. true
- b. false