

First-Year Companion Guide 2nd Edition
Chapter 9 (23)

Check Your Understanding

1. Which of the following best describes TCP/IP?
 - A. It is a suite of protocols that can be used to communicate across any set of interconnected networks.
 - B. It is a suite of protocols that allows LANs to connect into WANs.
 - C. It is a suite of protocols that allows for data transmission across a multitude of networks.
 - D. It is a suite of protocols that allows different devices to be shared by interconnected networks.
2. Which of the following does not describe the TCP/IP protocol stack?
 - A. It maps closely to the OSI reference model's upper layers.
 - B. It supports all standard physical and data link protocols.
 - C. It transfers information in a sequence of datagrams.
 - D. It reassembles datagrams into complete messages at the receiving location.
3. The TCP/IP protocol suite has specifications for which layer(s) of the OSI model?
 - A. 1 through 3
 - B. 1 through 4 and 7
 - C. 3, 4, and 5 through 7
 - D. 1, 3, and 4
4. Which of the following is not a function of the network layer?
 - A. RARP determines network addresses when data link layer addresses are known.
 - B. ICMP provides control and messaging capabilities.
 - C. ARP determines the data link layer address for known IP addresses.
 - D. UDP provides connectionless exchanges of datagrams without acknowledgments.
5. Which of the following is one of the protocols found at the transport layer?
 - A. UCP
 - B. UDP
 - C. TDP
 - D. TDC
6. What is the purpose of port numbers?
 - A. They keep track of different conversations crossing the network at the same time.
 - B. Source systems use them to keep a session organized and to select the proper application.
 - C. End systems use them to dynamically assign end users to a particular :: session, depending on their application use.
 - D. Source systems generate them to predict destination addresses.
7. Which of the following best describes UDP?
 - A. A protocol that acknowledges flawed or intact datagrams
 - B. A protocol that detects errors and requests retransmissions from the source
 - C. A protocol that processes datagrams and requests retransmissions when necessary
 - D. A protocol that exchanges datagrams without acknowledgments or guaranteed delivery
8. Which of the following TCP/IP layers includes file transfer, e-mail, remote login, and network management?
 - A. Transport
 - B. Application
 - C. Internet
 - D. Network

9. Why are TCP three-way handshake/open connections used?
 - A. To ensure that lost data can be recovered if problems occur later
 - B. To determine how much data the receiving station can accept at one time
 - C. To provide efficient use of bandwidth by users
 - D. To change binary ping responses into information in the upper layers

10. What does a TCP sliding window do?
 - A. It makes the window larger so that more data can come through at once, which results in more efficient use of bandwidth.
 - B. The window size slides to each section of the datagram to receive data, which results in more efficient use of bandwidth.
 - C. It allows the window size to be negotiated dynamically during the TCP session, which results in more efficient use of bandwidth.
 - D. It limits the incoming data so that each segment must be sent one by one, which is an inefficient use of bandwidth.

11. UDP segments use what protocols to provide reliability?
 - A. Network layer protocols
 - B. Application layer protocols
 - C. Internet protocols
 - D. Transmission Control Protocols

12. What is the purpose of ICMP testing?
 - A. To determine whether messages reach their destination and, if they don't, to determine possible reasons why they did not
 - B. To make sure that all activity on the network is being monitored
 - C. To determine whether the network was set up according to the model
 - D. To determine whether the network is in control mode or user mode

13. Assuming that the MAC is not in the ARP table, how does a sender find out the destination's MAC address?
 - A. It sends a message to all the addresses, searching for the address.
 - B. It sends out a broadcast message to the entire LAN.
 - C. It sends out a broadcast message to the entire network.
 - D. All of the above

14. Which of the following best describes window size?
 - A. The maximum size of the window that software can have and still process data rapidly
 - B. The number of messages or bytes that can be transmitted while awaiting an acknowledgment
 - C. The size of the window, in picas, that must be set ahead of time so that data can be sent
 - D. The size of the window opening on a monitor, which is not always equal to the monitor size

15. If I am Host A in the process of setting up a three-way handshake with Host B, and I send a segment with sequence number n to Host B, what will B send back to me as an acknowledgment?
 - A. n
 - B. $n+1$
 - C. $n+n$
 - D. $n + 1$

16. If the source is using a window size of 512 bytes to send data and it does not get a response back from the destination, what will the source do?
 - A. Stop sending data
 - B. Query the destination to see if the line is still up
 - C. Resend the data
 - D. Confirm the window size with the destination

17. What does the following describe: Provides sequencing of segments with a forward reference acknowledgment, numbers the first bytes of each segment before transmission, and reassembles the segments into a complete message.
- A. Header checksums and data protocol checksums
 - B. TCP sequence and acknowledgment numbers
 - C. Expectational acknowledgments
 - D. Simple UDP acknowledgment
18. What is the purpose of the Protocol field in an IP datagram?
- A. It numbers the Layer 3 protocol and makes it similar to a port number.
 - B. It determines the Layer 4 protocol being carried within an IP datagram.
 - C. It changes other protocols so that they can be used by IP.
 - D. It allows dynamic generation of source protocols.
19. What is the purpose of ICMP messages?
- A. They put the internetwork in control mode so that protocols can be set up.
 - B. They are messages that the network uses to monitor connection protocols.
 - C. They are standard binary messages that act as model internetwork protocols.
 - D. They are messages carried in IP datagrams and are used to send error and control messages.
20. What is the function of ARP?
- A. It completes research for a Layer 3 destination address.
 - B. It is used to develop a cached Layer 4 address resource table.
 - C. It is used to map an IP address to a MAC address.
 - D. It sends a broadcast message looking for the router IP address.

Answers

1. A 2. A 3. C 4. D 5. B 6. A 7. D 8. B 9. A 10. C 11. B
12. A 13. D 14. B 15. D 16. C 17. B 18. B 19. D 20. C