***Business Data Networks and Security, 10e* (Panko)**
Chapter 2 Network Standards

1) Internet standards are published as _____.
A) RFCs
B) IETFs
C) TCP/IPs
D) Internet Protocols
Answer: A
Diff: 1
Question: 1a
Objective: Explain how internet standards are made and why this approach is valuable.
Classification: Concept

2) *Standards* mean the same thing as _____.
A) semantics
B) syntax
C) rules
D) protocols
Answer: D
Diff: 1
Question: 2a
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

3) Standards govern _____.
A) semantics
B) syntax
C) both A and B
D) neither A nor B
Answer: C
Diff: 1
Question: 3a
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

4) The meaning of a message is referred to as the message's _____.
A) protocol
B) order
C) syntax
D) semantics
Answer: D
Diff: 1
Question: 3b
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

5) How a message is organized is its _____.
A) protocol
B) order
C) syntax
D) semantics
Answer: C
Diff: 1
Question: 3c
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

6) A message's semantics is its _____.
A) protocol
B) message order
C) meaning
D) structure
Answer: C
Diff: 1
Question: 3d
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

7) A message's syntax is its _____.
A) protocol
B) message order
C) meaning
D) structure
Answer: D
Diff: 1
Question: 3e
Objective: Provide the definitions of network standards and protocols, message syntax, semantics, and order.
Classification: Concept

8) In an HTTP, which one (browser or Webserver application program) transmits message first?
A) browser
B) Webserver application program
C) They transmit simultaneously.
D) It depends on the situation.
Answer: A
Diff: 1
Question: 4a
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

9) In HTTP, which program may initiate communication?
A) browser
B) Webserver program
C) both A and B
D) neither A nor B
Answer: A
Diff: 1
Question: 4b
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

10) Host P transmits a SYN segment to Host Q. If host Q is willing to open the connection, it will transmit a(n) _____ segment.
A) ACK
B) SYN
C) SYN/ACK
D) none of the above
Answer: C
Diff: 1
Question: 4c
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

11) If a destination host does not receive a segment, it will _____.
A) transmit an ACK segment
B) transmit a NAC segment
C) transmit an RSND segment
D) none of the above
Answer: D
Diff: 2
Question: 4d
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

12) If the destination host receives a segment that has an error, it will _____.
A) transmit an ACK segment
B) transmit a NAC segment
C) transmit an RSND segment
D) none of the above
Answer: C
Diff: 2
Question: 4e
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

13) A sending host will retransmit a TCP segment if it _____.
A) receives an ACK segment
B) receives a NAC segment
C) receives an RPT segment
D) none of the above
Answer: D
Diff: 2
Question: 4f
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

14) In a four-step close, which side transmits a FIN segment?
A) the side that initiates the close
B) the other side
C) either side
D) neither side
Answer: C
Diff: 1
Question: 4g
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

15) After the side wishing to close a TCP connection sends a FIN segment, the other side will _____.
A) not send any more segments
B) only send ACK segments
C) only send FIN segments
D) none of the above
Answer: B
Diff: 2
Question: 4h
Objective: Discuss message ordering in general and in HTTP and TCP.
Classification: Application

16) Which of the following is inside the header of messages?
A) address field
B) IP address field
C) data field
D) trailer
Answer: A
Diff: 3
Question: 5a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

17) The _____ contains the content being delivered by a message.
A) address field
B) header
C) data field
D) trailer
Answer: C
Diff: 1
Question: 5b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

18) A message always has a _____.
A) header
B) data field
C) both A and B
D) neither A nor B
Answer: A
Diff: 3
Question: 5c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

19) Which part of a message is less often in a message compared to the other two parts?
A) header
B) data field
C) trailer
D) All of the above are commonly seen in all messages.
Answer: C
Diff: 2
Question: 5d
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

20) "Octet" is the same as _____.
A) "bit"
B) "byte"
C) either A or B, depending on the context
D) neither A nor B
Answer: B
Diff: 1
Question: 5e
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

21) EUI-48 addresses are _____.
A) 32 bits long
B) 48 bits long
C) 128 bits long
D) Address length varies.
Answer: B
Diff: 1
Question: 6a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

22) An EUI-48 address was formerly called a(n) _____ address.
A) IPv4
B) IPv6
C) MAC
D) DNS
Answer: C
Diff: 1
Question: 6b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

23) _____ read(s) the destination address in an Ethernet frame.
A) The destination host
B) Switches in the network
C) both A and B
D) neither A nor B
Answer: C
Diff: 3
Question: 6c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

24) If the destination host finds an error in an Ethernet frame, it _____.
A) sends back a NAK
B) sends back a ACK
C) both A and B
D) neither A nor B
Answer: D
Diff: 1
Question: 6d
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

25) Ethernet does _____.
A) error detection
B) error correction
C) both A and B
D) neither A nor B
Answer: A
Diff: 1
Question: 6e
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

26) In IP, the first bit in the second row is _____.
A) 0
B) 31
C) 32
D) 63
Answer: C
Diff: 3
Question: 7a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

27) How long are IPv4 addresses?
A) 4 bits
B) 32 bits
C) 48 bits
D) 128 bits
Answer: B
Diff: 1
Question: 7b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

28) How long are IPv4 addresses in octets?
A) 4 octets
B) 32 octets
C) 48 octets
D) 128 octets
Answer: A
Diff: 3
Question: 7c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

29) To make a forwarding decision, a router looks at the arriving packet's _____.
A) destination IP address
B) destination EUI-48 address
C) both A and B
D) MAC addresses
Answer: A
Diff: 3
Question: 7d
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

30) IP is _____.
A) reliable
B) unreliable
C) semi-reliable
D) unreliable or reliable depending on the situation
Answer: B
Diff: 1
Question: 7e
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

31) TCP messages are called _____.
A) segments
B) fragments
C) packets
D) datagrams
Answer: A
Diff: 1
Question: 8a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

32) TCP has six single-bit fields in headers and these single-bit fields are called _____ fields.
A) port
B) flag
C) ACK
D) binary
Answer: B
Diff: 1
Question: 9a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

33) If someone says that a 1-bit flag is set, this means that it is given the value _____.
A) 0
B) 1
C) either A or B
D) neither A nor B
Answer: B
Diff: 1
Question: 9b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

34) The UDP has _____ fields.
A) 4
B) 8
C) 16
D) 32
Answer: A
Diff: 1
Question: 10a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

35) The UDP _____.
A) is unreliable
B) has a checksum field
C) both A and B
D) neither A nor B
Answer: C
Diff: 2
Question: 10b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

36) UDP is _____.
A) reliable
B) unreliable
C) It depends on the situation.
D) none of the above
Answer: B
Diff: 1
Question: 10c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

37) On a server, well-known port numbers indicate _____.
A) applications
B) connections with client computers
C) both A and B
D) neither A nor B
Answer: A
Diff: 2
Question: 11a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

38) For every conversation, a client randomly generates an ephemeral port number for _____.
A) applications
B) conversations
C) both A and B
D) neither A nor B
Answer: B
Diff: 2
Question: 11b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

39) The range of port 1024 to port 4999 is the usual range for _____ port numbers.
A) well-known
B) ephemeral
C) both A and B
D) neither A nor B
Answer: B
Diff: 3
Question: 11c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

40) 2500 is in the range for _____ port numbers.
A) well-known
B) ephemeral
C) both A and B
D) neither A nor B
Answer: B
Diff: 3
Question: 11d
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

41) The source socket is 60.171.18.22:2707. The source is a(n) _____.
A) client
B) server
C) well-known server
D) ephemeral server
Answer: A
Diff: 2
Question: 11e
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

42) Which of the following is a socket?
A) 80
B) 21
C) both A and B
D) neither A nor B
Answer: D
Diff: 2
Question: 12a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

43) The source socket is 60.171.18.22:2707. The source host is a(n) _____.
A) client
B) server
C) well-known server
D) ephemeral server
Answer: A
Diff: 2
Question: 12b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

44) The destination socket is 60.171.18.22:161. The destination host is a(n) _____.
A) client
B) server
C) well-known server
D) ephemeral server
Answer: B
Diff: 2
Question: 12c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

45) The application standard is almost always _____.
A) HTTP
B) TCP
C) reliable
D) None of the above is true.
Answer: D
Diff: 2
Question: 13a
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

46) Which of the following layers has more standards than the other three layers?
A) data link
B) Internet
C) transport
D) application
Answer: D
Diff: 2
Question: 13b
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

47) At which layer would you find standards for requesting videos from a video-sharing site such as YouTube?
A) application
B) transport
C) Internet
D) none of the above
Answer: A
Diff: 2
Question: 13c
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

48) At which layer would you find file transfer protocol (FTP) standards for downloading files from an FTP server?
A) application
B) transport
C) Internet
D) none of the above
Answer: A
Diff: 2
Question: 13d
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

49) In HTTP headers, the end of a header field is usually indicated by a _____.
A) .
B) :
C) ;
D) none of the above
Answer: D
Diff: 2
Question: 13e
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Application

50) In HTTP, the end of a header field is usually indicated by a _____.
A) bit position
B) CRLF
C) colon
D) blank line
Answer: B
Diff: 2
Question: 13f
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

51) An HTTP request message usually has a _____.
A) header
B) data field
C) both A and B
D) neither A nor B
Answer: A
Diff: 2
Question: 13g
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

52) An HTTP response message usually has a _____.
A) trailer
B) data field
C) both A and B
D) neither A nor B
Answer: B
Diff: 2
Question: 13h
Objective: Discuss message syntax in general and in Ethernet frames, IP packets, TCP segments, UDP datagrams, and HTTP request and response messages.
Classification: Concept

53) Converting application messages into bits is called _____.
A) encapsulation
B) encryption
C) encoding
D) exchange
Answer: C
Diff: 1
Question: 14a
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Concept

58) Convert a decimal number 15 to the binary number.
A) It is a binary number.
B) 1100
C) 1101
D) 1111
Answer: D
Diff: 3
Question: 16c
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

59) Convert decimal 8 to binary.
A) 100
B) 1000
C) 10000
D) 111
Answer: B
Diff: 3
Question: 16d
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

60) A 5-bit field can represent _____ alternatives or different combinations.
A) 8
B) 16
C) 32
D) 64
Answer: C
Diff: 2
Question: 17a
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

61) A 7-bit field can represent _____ alternatives or different combinations.
A) 14
B) 49
C) 128
D) 256
Answer: C
Diff: 2
Question: 17b
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

62) To represent 65 alternatives, your alternatives field would have to be at least _____ bits long.
A) 5
B) 6
C) 7
D) 8
Answer: C
Diff: 2
Question: 17c
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

63) The five senses can be represented with a _____-bit field.
A) 2
B) 3
C) 4
D) 5
Answer: B
Diff: 2
Question: 17d
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

64) The electrical signal generated by a microphone is called a(n) _____ signal.
A) binary
B) digital
C) analog
D) Either A or B.
Answer: C
Diff: 1
Question: 18a
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Concept

65) A codec _____.
A) encodes voice sounds into digital signals for transmission
B) encodes voice sounds into analog signals for transmission
C) encrypts the signal
D) converts binary voice signals into digital signals for transmission
Answer: D
Diff: 3
Question: 18b
Objective: Explain how to encode application messages into bits (1s and 0s).
Classification: Application

66) _____ is placing a message in the data field of another message.
A) Encoding
B) Vertical communication
C) Layering
D) Encapsulation
Answer: D
Diff: 2
Question: 19a
Objective: Explain vertical communication on hosts.
Classification: Concept

67) After the Internet layer process does encapsulation, it passes the IP packet to the _____
layer process.
A) transport
B) data link
C) physical
D) none of the above
Answer: B
Diff: 2
Question: 19b
Objective: Explain vertical communication on hosts.
Classification: Application

68) After the data link layer process does encapsulation, it passes the IP packet to the _____
layer process.
A) physical
B) internet
C) transport
D) none of the above
Answer: A
Diff: 1
Question: 19c
Objective: Explain vertical communication on hosts.
Classification: Application

69) Which layer process does NOT do any encapsulation when an application layer process
transmits a message?
A) physical
B) data link
C) Internet
D) All layers do encapsulation.
Answer: A
Diff: 1
Question: 19d
Objective: Explain vertical communication on hosts.
Classification: Application