

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

54) At what layer is encoding done?

- A) application
- B) transport
- C) Internet
- D) none of the above

Answer: A

Diff: 3

Question: 14b

Objective: Explain how to encode application messages into bits (1s and 0s).

Classification: Concept

55) How many bytes will it take to transmit "Brain Dead" without the quotation marks?

- A) 2
- B) 3
- C) 9
- D) none of the above

Answer: D

Diff: 3

Question: 15a

Objective: Explain how to encode application messages into bits (1s and 0s).

Classification: Application

56) Which of the following is an integer?

- A) 4,307
- B) 45.7
- C) both A and B
- D) neither A nor B

Answer: A

Diff: 1

Question: 16a

Objective: Explain how to encode application messages into bits (1s and 0s).

Classification: Application

57) Convert the binary number 100 to decimal.

- A) It is in decimal.
- B) 2
- C) 4
- D) 8

Answer: C

Diff: 2

Question: 16b

Objective: Explain how to encode application messages into bits (1s and 0s).

Classification: Application

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