

Business Data Networks and Security, 11e (Panko)

Chapter 1 Core Network Concepts and Terminology

1) Flooding a host with traffic so that it cannot serve its legitimate users is a _____ attack.

- A) hacking
- B) virus
- C) malware
- D) DoS

Answer: D

Difficulty: Basic

Question: 1a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

2) The KrebsOnSecurity.com attack _____.

- A) was a denial of service attack.
- B) used IoT devices to attack the site
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Basic

Question: 1b

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

3) Internet communication that does not involve a human is referred to with the term _____.

- A) World Wide Web
- B) impersonal
- C) anonymous
- D) IoT

Answer: D

Difficulty: Difficult

Question: 1c

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

4) If a host cannot reach a DNS server, it _____.

- A) cannot have a host name
- B) will have to rely on host names
- C) will need to use a DHCP server
- D) is unlikely to be able to communicate with most server hosts

Answer: D

Difficulty: Difficult

Question: 1d

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

5) The Mirai bots in the KrebsOnSecurity.com attack were _____.

- A) client hosts
- B) server hosts
- C) IoT devices
- D) all of the above

Answer: C

Difficulty: Basic

Question: 1e

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

6) ISPs _____.

- A) carry traffic in the Internet
- B) connect users to the Internet
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Basic

Question: 3a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

7) A packet sent from one host to another over the Internet will ALWAYS pass through _____.

- A) a single ISP
- B) more than 2 ISPs
- C) exactly 2 ISPs
- D) none of the above

Answer: D

Difficulty: Difficult

Question: 3c

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

8) We call any device connected to the Internet a(n) _____.

- A) IP
- B) client
- C) router
- D) host

Answer: D

Difficulty: Basic

Question: 4a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

9) Which of the following is a host when it's on a network?

- A) a client PC
- B) a server
- C) a mobile phone
- D) all of the above

Answer: D

Difficulty: Basic

Question: 4b

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

10) Which of the following is constantly leading to new applications?

- A) increasing speed
- B) increasing reliability
- C) increasing availability wherever you are
- D) all of the above

Answer: D

Difficulty: Basic

Question: 5a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

11) Who owns the Internet?

- A) The U.S. Government
- B) The United Nations
- C) The IETF
- D) No one

Answer: D

Difficulty: Basic

Question: 6a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

12) Who is in charge of the Internet?

- A) the U.S. Government
- B) the United Nations
- C) the IETF
- D) No one

Answer: D

Difficulty: Basic

Question: 6b

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

13) The IETF primarily _____.

- A) manages the Internet
- B) creates Internet standards
- C) coordinates the work of ISPs
- D) all of the above

Answer: B

Difficulty: Difficult

Question: 6c

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

14) From a security perspective, the Internet's ability to give access to nearly everyone is a _____.

- A) good thing
- B) bad thing
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Difficult

Question: 7b

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology, Analytical Thinking

15) In the name Internet, "inter" means _____.

- A) between
- B) interior
- C) international
- D) interplanetary

Answer: A

Difficulty: Basic

Question: 8a

Objective: Discuss how the Internet is changing and the security challenges these changes are creating.

AACSB: Applying Information Technology

16) Depicting the Internet as a cloud symbolizes _____.

- A) the Internet is amorphous
- B) the Internet today is too complex to be understandable by humans
- C) the Internet is too complex for anyone to depict
- D) users do not have to know how the Internet operates

Answer: D

Difficulty: Basic

Question: 9a

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Analytical Thinking

17) When you use your tablet to access the internet, the tablet is a _____.

- A) client host
- B) server host
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 10a

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

18) Most servers are _____.

- A) mainframes
- B) Windows PCs
- C) rack servers
- D) routers

Answer: C

Difficulty: Basic

Question: 10b

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology

19) The client program is usually a browser.

Answer: FALSE

Difficulty: Basic

Question: 11b

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

20) The server program is always a webserver program.

Answer: FALSE

Difficulty: Basic

Question: 11c

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

21) The network stack implements the _____ layer process.

- A) application
- B) transport
- C) physical
- D) data link

Answer: B

Difficulty: Difficult

Question: 12a

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

22) The transport process always fragments the application message.

Answer: FALSE

Difficulty: Difficult

Question: 12c

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

23) What process adds a header in front of an application message or fragment?

- A) application
- B) transport
- C) internet
- D) data link

Answer: B

Difficulty: Basic

Question: 12d

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

24) A TCP message is called a _____.

- A) datagram
- B) packet
- C) frame
- D) none of the above

Answer: D

Difficulty: Basic

Question: 12e

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology

25) What process adds a header in front of a TCP segment?

- A) Application
- B) Transport
- C) Internet
- D) Data Link

Answer: C

Difficulty: Basic

Question: 12f

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

26) An IP packet may include a(n) _____.

- A) application message or fragment
- B) TCP segment or UDP datagram
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Difficult

Question: 13

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

27) When a frame arrives, the data link process on the destination host _____.

- A) adds a header
- B) removes a header
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 14a

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

28) The transport layer on the destination host _____.

- A) reassembles the application message if it has been fragmented
- B) removes the transport header
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Difficult

Question: 14b

Objective: Explain basic concepts and terminology for the hosts (devices) that connect to the Internet.

AACSB: Applying Information Technology, Application of Knowledge

29) IPv4 addresses are _____ bits long.

- A) 32
- B) 64
- C) 128
- D) none of the above

Answer: A

Difficulty: Basic

Question: 15a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

30) _____ addresses are 32 bits long.

- A) IPv4
- B) IPv6
- C) EUI-48
- D) none of the above

Answer: A

Difficulty: Basic

Question: 15a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

31) Which is NOT in an IP packet?

- A) Internet header
- B) Transport header
- C) Data link header
- D) All of the above are part of the IP packet.

Answer: C

Difficulty: Difficult

Question: 16a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking

32) To deliver IPv4 packets, routers look at the _____ addresses.

- A) dotted decimal notation
- B) EUI-48
- C) IPv4
- D) all of the above

Answer: C

Difficulty: Basic

Question: 16c

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Application of Knowledge

33) Routing is based on a(n) _____.

- A) IP address
- B) single-network address
- C) either A or B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 17a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Application of Knowledge

34) Router forwarding is called _____.

- A) routing
- B) switching
- C) forwarding
- D) none of the above

Answer: A

Difficulty: Difficult

Question: 17b

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

35) paths across a single network are called _____.

- A) routes
- B) data links
- C) physical links
- D) none of the above

Answer: B

Difficulty: Basic

Question: 18a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

36) When a source host sends a packet to a destination host, there will probably be _____ along the way.

- A) more routes
- B) more data links
- C) about the same number of routes and data links
- D) all of the above

Answer: B

Difficulty: Difficult

Question: 18d

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

37) If there are 10 routers between the source and destination hosts, how many transport processes will be involved on all devices?

- A) 1
- B) 2
- C) 10
- D) 12

Answer: B

Difficulty: Difficult

Question: 19a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

38) If there are 10 routers between the source and destination hosts, how many internet processes will be involved on all devices?

- A) 1
- B) 2
- C) 10
- D) 12

Answer: D

Difficulty: Difficult

Question: 19a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

39) Which of the following is an Internet supervisory protocol?

- A) DNS
- B) IP
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Difficult

Question: 20

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

40) On the Internet, a _____ host usually gets a dynamic IP address.

- A) client
- B) server
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 21a

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

41) On the Internet, a _____ host usually gets a static IP address.

- A) client
- B) server
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 21b

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

42) A host with a(n) _____ IP address is easier to find than a host with a _____ IP address.

- A) dynamic, static
- B) static, dynamic
- C) undetermined, static
- D) undetermined, dynamic

Answer: B

Difficulty: Basic

Question: 21c

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

43) A DHCP server to assigns the client host the same IP address each time.

Answer: FALSE

Difficulty: Basic

Question: 21d

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

44) When Host A wishes to communicate with Host B, a DNS server provides the IP address of _____.

- A) Host A
- B) the DNS server
- C) Host B
- D) none of the above

Answer: C

Difficulty: Basic

Question: 22b

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

45) When Host A wishes to talk with Host B, the DHCP server provides the IP address of _____.

- A) Host A
- B) DNS server
- C) Host B
- D) all of the above

Answer: A

Difficulty: Difficult

Question: 22b

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

46) The originating host needs to contact the DNS server each time it sends a packet to the target host.

Answer: FALSE

Difficulty: Basic

Question: 22c

Objective: Explain basic concepts and terminology for the Internet itself.

AACSB: Applying Information Technology

47) In a single switched network, a _____ connects consecutive switches.

- A) physical link
- B) data link
- C) route
- D) none of the above.

Answer: A

Difficulty: Basic

Question: 23a

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

48) In a point-to-point single network, how many physical links will there be when a packet is transmitted?

- A) 0
- B) 1
- C) 2
- D) We cannot say with the information provided.

Answer: B

Difficulty: Basic

Question: 23b

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

49) When a packet is transmitted, there is a single data link in each _____.

- A) point-to-point single network
- B) switched network
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Basic

Question: 23c

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

50) In a point-to-point single network, there is always the same number of physical and data links.

Answer: TRUE

Difficulty: Difficult

Question: 23c

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

51) Which of the following is true?

- A) Frames are carried inside packets.
- B) Packets are carried inside frames.
- C) both A and B
- D) neither A nor B

Answer: B

Difficulty: Basic

Question: 25a

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology

52) A host sends a packet to another host containing seven single networks along the way. How many other hosts will there be along the route when Host A transmits?

- A) 1
- B) 2
- C) 7
- D) 9

Answer: A

Difficulty: Difficult

Question: 25b

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

53) A host sends a packet to another host containing six single networks along the way. How many data links are used for this transmission?

- A) 1
- B) 6
- C) 7
- D) 8

Answer: B

Difficulty: Difficult

Question: 25c

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

54) A host sends a packet to another host containing six single networks along the way. How many routes are included in this transmission?

- A) 1
- B) 6
- C) 7
- D) 8

Answer: A

Difficulty: Basic

Question: 25d

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

55) A host sends a packet to another host with six single networks along the way. How many frames are involved?

- A) 1
- B) 6
- C) 7
- D) 8

Answer: B

Difficulty: Basic

Question: 25e

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

56) A host sends a packet to another host with six single networks along the way. How many packets are involved in this transmission?

- A) 1
- B) 6
- C) 7
- D) 8

Answer: A

Difficulty: Basic

Question: 25d

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

57) In a single switched network with seven switches between a source and destination host, the source host *addresses* the frame _____.

- A) to the first switch
- B) to the destination host
- C) to the first router
- D) to the final switch

Answer: B

Difficulty: Difficult

Question: 25g

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

58) The final router in a route sends the packet being routed in a frame addressed to the _____.

- A) next-hop router
- B) destination host
- C) local router
- D) default router

Answer: B

Difficulty: Difficult

Question: 25h

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

59) All data link addresses are EUI-48 addresses.

Answer: FALSE

Difficulty: Basic

Question: 26a

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology

60) Source and destination IP addresses are found in the _____ header.

- A) IP
- B) Frame
- C) TCP
- D) all of the above.

Answer: A

Difficulty: Basic

Question: 26b

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

61) Source and destination EUI-48 addresses are found in _____ headers.

- A) IP
- B) frame
- C) TCP
- D) UDP

Answer: B

Difficulty: Basic

Question: 26c

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Application of Knowledge

62) Ethernet uses _____ addresses.

- A) IPv4
- B) IPv6
- C) MAC
- D) EUI-48

Answer: D

Difficulty: Basic

Question: 26d

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology

63) Wi-Fi uses _____ addresses.

- A) IPv4
- B) IPv6
- C) MAC
- D) EUI-48

Answer: D

Difficulty: Basic

Question: 26e

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology

64) Which of the following uses EUI-48 addresses?

- A) Ethernet
- B) Wi-Fi
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Basic

Question: 26e

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

65) Hosts on the Internet have _____ addresses.

- A) IP
- B) data link
- C) both A and B
- D) neither A nor B

Answer: C

Difficulty: Difficult

Question: 26f

Objective: Explain basic concepts and terminology for single networks and their role on the Internet.

AACSB: Applying Information Technology, Analytical Thinking, Application of Knowledge

66) _____ have access points.

- A) Home access routers
- B) Internet core routers
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 27a

Objective: Explain the distinctions between Internet routers and personal access routers; explain the differences between personal access routers and wireless access points.

AACSB: Applying Information Technology, Application of Knowledge

67) _____ have DHCP servers.

- A) Home access routers
- B) Internet core routers
- C) both A and B
- D) neither A nor B

Answer: A

Difficulty: Basic

Question: 27a

Objective: Explain the distinctions between Internet routers and personal access routers; explain the differences between personal access routers and wireless access points.

AACSB: Applying Information Technology, Application of Knowledge

68) Which of the following has better access point capabilities?

- A) Home access routers
- B) Corporate access points
- C) Both have about the same access point capabilities.

Answer: B

Difficulty: Basic

Question: 27c

Objective: Explain the distinctions between Internet routers and personal access routers; explain the differences between personal access routers and wireless access points.

AACSB: Applying Information Technology, Application of Knowledge