Wireless and Mobile Device Security 3rd edition Doherty Test Bank

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Chapter 1

Multiple Choice

1. By the 1950s, which form of communication had become ubiquitous and affordable across telecommunications systems?
   A) Telegraphy
   B) Telephony
   C) Public switched telephone network (PSTN)
   D) Circuit switching

Ans: C
H1-head: The Dawn of Data Communication
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy
Taxonomy: Remember

2. Which of the following best describes circuit switching?
   A) A physical connection made between two phones
   B) A signal that is first digitized and then chopped up
   C) Start and stop signals of dots and dashes transmitted over copper wires
   D) Required to transfer digital communications over analog lines

Ans: A
H1-head: The Dawn of Data Communication
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Understand

3. What began as the result of a U.S. government project and is the predecessor of the Internet?
   A) WiMAX
   B) TCP/IP
   C) ARPANET
   D) LAN

Ans: C
H1-head: The Dawn of Data Communication

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Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Remember

4. Which of the following best illustrates the Network Layer of the Open Systems Interconnection (OSI) Reference Model?
   A) Steve has decided to run his gaming computer on a wired connection, so he turns off the Wi-Fi connection on that computer and plugs in an Ethernet cable.
   B) Gerald is setting up a small home/office network for a friend. The network is both wired and wireless, and he is configuring Internet Protocol version 4 (IPv4) addressing for each device.
   C) The network interface card on Chantelle's computer has failed. When she replaces it with a new one, her computer will acquire a new Media Access Control (MAC) address.
   D) A copper wire segment of the telephone system in Maria's apartment has failed, requiring a technician from the phone company to come and replace it.

Ans: B
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Hard
Taxonomy: Analyze

5. Which of the following has a 128-bit address scheme?
   A) Internet Protocol version 4 (IPv4)
   B) Internet Protocol version 6 (IPv6)
   C) Media Access Control (MAC) addressing
   D) Transmission Control Protocol

Ans: B
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy
Taxonomy: Understand

6. Which of the following contains eight fields of four-digit hexadecimal (base 16) numbers (0 to 9 and a to f)?
   A) An Internet Protocol version 4 (IPv4) address
   B) An Internet Protocol version 6 (IPv6) address
   C) A typical Media Access Control (MAC) address

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D) Both an Internet Protocol version 4 (IPv4) address and an Internet Protocol version 6 (IPv6) address

Ans: B
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Understand

7. Which of the following is the correct shortened version of the Internet Protocol version 6 (IPv6) address of 2051:0011:13A2:0000:0000:03b2:000a:19aa?
   A) 2051:11:13a2:00:3b2:a:19aa
   B) 2051:11:13a2:0:0:3b2:a
   C) 2051:11:13a2:-:3b2:a:19aa
   D) 2051:11:13a2:0:0:3b2:a:19aa

Ans: D
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Hard
Taxonomy: Analyze

8. Which layer of the Open Systems Interconnection (OSI) Reference Model is typically viewed as the routing or Internet Protocol (IP) layer?
   A) Physical Layer
   B) Data Link Layer
   C) Network Layer
   D) Presentation Layer

Ans: C
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Understand

9. Which layer of the Open Systems Interconnection (OSI) Reference Model formats information sent to and from applications?
   A) Physical Layer
   B) Data Link Layer
   C) Network Layer

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D) Presentation Layer

Ans: D
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Understand

10. Which layer of the Open Systems Interconnection (OSI) Reference Model handles communication paths between local area networks (LANs)? Internet Protocol (IP) exists at this layer as well.
    A) Physical Layer
    B) Data Link Layer
    C) Network Layer
    D) Presentation Layer

Ans: C
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Understand

11. Which two layers of the Open Systems Interconnection (OSI) Reference Model are closely associated due to the use of Transmission Control Protocol/Internet Protocol (TCP/IP)?
    A) Physical and Data Link (layers 1 and 2)
    B) Data Link and Network (layers 2 and 3)
    C) Network and Transport (layers 3 and 4)
    D) Transport and Presentation (layers 4 and 6)

Ans: C
H1-head: Networking and the Open Systems Interconnection Reference Model
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Complexity: Medium
Taxonomy: Analyze

12. Which of the following is *not* true of network switches?
    A) A switch connects different network segments via switch ports.
    B) A switch makes forwarding decisions regarding data packets.
    C) Switches play a significant role in the Physical Layer of the OSI Reference Model.
    D) A switch deals with Media Access Control (MAC) addresses.

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Ans: C
H1-head: Networking and the Open Systems Interconnection Reference Model
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Complexity: Hard
Taxonomy: Understand

13. Which of the following refers collectively to the seven layers of the Open Systems Interconnection (OSI) Reference Model?
    A) Pipe
    B) Protocol
    C) Stack
    D) Subnet

Ans: C
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
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Complexity: Easy
Taxonomy: Understand

14. Which of the following is a feature of Internet Protocol version 4 (IPv4)?
    A) Auto-configuration
    B) Four octets
    C) Built-in security
    D) A 128-bit address scheme

Ans: B
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
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Complexity: Medium
Taxonomy: Understand

15. Which layer of the Open Systems Interconnection (OSI) Reference Model represents the signal path over which data is transmitted? This can include copper wires, optical fibers, or radio signals, such as Wi-Fi.
    A) Physical Layer
    B) Data Link Layer
    C) Network Layer
    D) Presentation Layer

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Ans: A
H1-head: Networking and the Open Systems Interconnection Reference Model
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Complexity: Medium
Taxonomy: Understand

16. Which layer of the Open Systems Interconnection (OSI) defines and manages communications between applications on separate devices?
    A) Application Layer
    B) Session Layer
    C) Network Layer
    D) Physical Layer

Ans: B
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
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Complexity: Hard
Taxonomy: Understand

17. A wireless network operates at which IEEE 802 standard?
    A) 802.1
    B) 802.3
    C) 802.10
    D) 802.11

Ans: D
H1-head: From Wired to Wireless
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy
Taxonomy: Remember

18. Which of the following involves a home address, a home agent, and a foreign agent, among other components?
    A) Packet switching
    B) Mobile IP
    C) Circuit switching
    D) Bluetooth

Ans: B
H1-head: The Wi-Fi Market

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Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium
Taxonomy: Remember

19. Carla is using her smartphone to exchange text messages with her supervisor. She can continue texting while walking from her car in the parking lot through several buildings to her office, while automatically switching between wireless Ethernet and cellular connections. Which term describes this capability, as defined by the International Engineering Task Force (IETF)?
    A) 4G
    B) Cellular
    C) Mobile IP
    D) Wireless LAN (WLAN)

Ans: C
H1-head: The Wi-Fi Market
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Hard
Taxonomy: Apply

20. Which of the following best describes the Internet of Things (IoT)?
    A) A physical connection made between two phones
    B) The interconnection of virtually any electronic device that can be controlled and optimized via automation or remotely via an Internet connection
    C) The transfer of packets containing voice information along with the source and destination
    D) A model that defines standards for communication protocols as well as for the physical and logical interfaces between machines and subsystems

Ans: B
H1-head: The Internet of Things
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Hard
Taxonomy: Understand

True/False

1. True or False? In packet switching, the voice signal is first digitized and then chopped up into a series of packets.

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Ans: True
H1-head: The Dawn of Data Communication
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

2. True or False? Ethernet is an Open Systems Interconnection (OSI) Reference Model Layer 4 protocol.

Ans: False
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

3. True or False? In the Open Systems Interconnection (OSI) Reference Model, communication between the layers is accomplished through the use of headers.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

4. True or False? The Open Systems Interconnection (OSI) Reference Model helped organizations avoid standardizing around a single vendor for their entire network.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

5. True or False? The Bluetooth protocol is defined at Layer 1 in the Open Systems Interconnection (OSI) Reference Model.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

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6. True or False? The Data Link Layer (Layer 2) of the Open Systems Interconnection (OSI) Reference Model is viewed as the "switching" layer because it is the layer where switching paths are determined in LANs.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

7. True or False? The Transport Layer of the Open Systems Interconnection (OSI) Reference Model is the bridge between the network and the application-processing software on devices.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

8. True or False? Internet Protocol version 4 (IPv4) uses a 128-bit address scheme, whereas Internet Protocol version 6 (IPv6) uses a 32-bit address scheme.

Ans: False
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

9. True or False? The Internet Protocol version 6 (IPv6) address space is fully used; no additional addresses are available.

Ans: False
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

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10. True or False? Internet Protocol (IP) addressing enables a network to correctly route packets across a network.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

11. True or False? Communication at the Network Layer of the Open Systems Interconnection (OSI) Reference Model is achieved through a logical addressing scheme.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

12. True or False? Internet Protocol version 6 (IPv6) addresses use a dotted decimal notation.

Ans: False
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

13. True or False? Where Ethernet connects LANs with each other, Internet Protocol (IP) connects data between machines that are all on the same network.

Ans: False
H1-head: Networking and the Open Systems Interconnection Reference Model
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

14. True or False? 2051:11:13a2:0:0:3b2:a:19aa is an example of an Internet Protocol v6 (IPv6) address.

Ans: True
H1-head: Networking and the Open Systems Interconnection Reference Model
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Title: The Evolution of Data and Wireless Networks

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Complexity: Easy

15. True or False? The Institute of Electrical and Electronics Engineers (IEEE) is the U.S. regulatory body in charge of telecommunications rules.

Ans: False
H1-head: From Wired to Wireless
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Hard

16. True or False? Opening the 900 MHz, 2.4 GHz, and 5.8 GHz radio frequencies to the general public had a major impact on the wireless device industry.

Ans: True
H1-head: From Wired to Wireless
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

17. True or False? Avoiding inventory losses can be achieved through the use of wireless tagging or radio-frequency identification (RFID).

Ans: True
H1-head: Business Challenges Addressed by Wireless Networking
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

18. True or False? The terms “Wi-Fi” and “WLAN” are often used interchangeably.

Ans: True
H1-head: Business Challenges Addressed by Wireless Networking
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Easy

19. True or False? The seamless transfer of an Internet Protocol (IP) address from one network to another without losing IP sessions is referred to as “IP mobility.”

Ans: True

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H1-head: The Wi-Fi Market
Subject: Chapter 1
Title: The Evolution of Data and Wireless Networks
Complexity: Medium

20. True or False? The Internet of Things (IoT) includes smart home devices and heart monitors.

Ans: True
H1-head: The Internet of Things
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Complexity: Medium

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