

Chapter 2 Test Bank

True / False

1. DNS servers are accountable for translating domain names and hostnames into their corresponding IP addresses.

True—Domain Name Servers are a network of servers on the Internet that translate domain names and individual hostnames into their corresponding IP addresses.

2. Another name for a DHCP-provided address is an APIPA/link-local address.

False—An APIPA/link-local address is generated automatically if a device cannot connect to a DHCP server to receive an IP address.

3. IPv6 addressing uses 128-bit addresses, compared to 32-bit addressing in IPv4.

True—As a result, IPv6 supports up to 3.4×10^{38} addresses and doesn't need to have separate address classes. IPv4 supports only 4.3×10^9 addresses.

4. TCP is a connection-oriented protocol.

True—TCP verifies that information has been sent and received. UDP, on the other hand, sends the information without verifying whether it has been received.

5. QoS is a connection setting that optimizes web page and e-commerce connections.

False—QoS (Quality of Service), when enabled, optimizes streaming media and VoIP connections.

6. UDP is used in streaming media sessions such as VoIP and gaming.

True—User Datagram Protocol (UDP) sessions are connectionless, making them very fast, and suitable for time-sensitive applications such as video chat and streaming media.

7. If you assign static IP addresses to each device in a SOHO network, you don't need DHCP.

True—The purpose of DHCP is to assign IP addresses dynamically. If all IP addresses are static, this function is no longer essential.

8. A wireless router might use Zigbee or Z-Wave to communicate with laptops.

False—Zigbee and Z-Wave are two types of low-power near-range protocols used with IoT equipment, not laptops.

9. A proxy server can both speed up Internet access and block requests from undesirable network traffic.

True—A proxy server acts as an intermediary between a client and another network, and its benefits include both performance and security enhancement.

10. An IDS device provides several types of security protections to a network, including firewall, VPN, web traffic filtering, and network intrusion prevention.

False—These capabilities are features of a Unified Threat Management (UTM) device, not an intrusion detection system (IDS) device.

Multiple Choice

11. Which of the following issues will cause a device to have an IPv4 address starting with 169.254.?

- a. Cannot get IP address from DHCP server
- b. Device exposed to public Internet with DMZ
- c. Port forwarding configured for device
- d. Device also has an IPv6 address.

Answer A. An IPv4 address starting with 169.254. is an APIPA/link-local address, meaning that the device could not get an IP address from a DHCP server.

12. IMAP uses which port by default?

- a. 25
- b. 110
- c. 143
- d. 443

Answer C. IMAP uses port 143.

13. POP3 uses which port by default?

- a. 25
- b. 110
- c. 143
- d. 443

Answer B. POP3 uses port 110.

14. A Windows computer's IP address is displayed with the command-prompt ipconfig command. Which of the following commands is used with macOS and Linux to display this information?

- a. osipcfg.
- b. ifconfig
- c. ipconfig
- d. termIP

Answer B. ifconfig is the equivalent of ipconfig command in Linux and macOS. The osipcfg and termIP commands are fictitious.

15. Which of these is a secure connection protocol?

- a. SSH
- b. FTP
- c. HTML
- d. Telnet

Answer A. The Secure Shell (SSH) network protocol is used to exchange encrypted data between two computers over a network.

16. What cable type transmits data through light rather than electrical signals?

- a. Fiber-optic
- b. Cable
- c. Ethernet STP
- d. Ethernet UTP

Answer A. Fiber-optic cabling transmits the signal through light rather than electrical signals.

17. An IPv4 address consists of _____ sets of numbers that range from 0 to 255.
- a. Two
 - b. Three
 - c. Four
 - d. Five

Answer C. An IPv4 address consists of four sets of numbers that range from 0 to 255, with each of the four sets of numbers representing an octet.

Matching

18. Match the following network installation functions with the correct tool.

- 1. Checks cable continuity and wire-pair configuration.
 - 2. Use this to attach a UTP cable to a patch panel.
 - 3. Use this to test the transmit/receive functions of a network card.
 - 4. Within a batch of cables, use this to locate or match up a cable from one end of a long run with the other end of the cable.
 - 5. Use this to remove the protective outer sheath of a cable.
 - 6. Use this to add an RJ-45 connector to the end of a UTP cable.
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- A. Cable tester
 - B. Crimper
 - C. Loopback plug
 - D. Punchdown tool
 - E. Toner probe (tone and probe)
 - F. Wire stripper

Answers

- 1. A
- 2. D
- 3. C
- 4. E
- 5. F
- 6. B

19. Match the following terms with their description.

- 1. DHCP
- 2. Ipconfig
- 3. LAN

4. Modem
5. POP3
6. Router
7. Switch
8. TCP/IP
9. WAN

- A. A network that covers a small physical area, such as a home, office, or small business
- B. A network that spans across multiple cities, countries, or continents
- C. A device that converts digital information into analog information for transmission over a telephone system
- D. A communication protocol suite used for data transfer across the Internet and similar networks
- E. A network device that sets a direct path for data to run from one system to another, which can be combined with a router or wireless access point
- F. A device that routes data from one network to another and is often integrated with wireless access points and switches
- G. Provides IP addresses as required and enables a limited number of IP addresses to service many devices that are not connected at the same time
- H. A Windows command used to display the current IP address, subnet mask, gateway, and additional network connections
- I. Email protocol used by client computers to download or receive email

Answers

1. G
2. H
3. A
4. C
5. I
6. F
7. E
8. D
9. B

20. Match the port numbers to the protocol.

Port Numbers

1. 21
2. 22
3. 23
4. 25
5. 53
6. 80
7. 110
8. 143

9. 443
10. 3389
11. 137-139
12. 445
13. 427
14. 548

Protocols

- A. DNS
- B. FTP
- C. HTTP
- D. HTTPS
- E. IMAP
- F. POP3
- G. RDP
- H. SMTP
- I. SSH
- J. Telnet
- K. AFP
- L. SLP
- M. NetBIOS/NetBT
- N. SMB/CIFS

Answers

1. B
2. I
3. J
4. H
5. A
6. C
7. F
8. E
9. D
10. G
11. M
12. N
13. L
14. K

21. Match server type to its description.

1. Authentication server
2. DHCP server
3. DNS server
4. File server

5. Mail server
6. Print server
7. Proxy server
8. Web server

- A. Handles HTTP or HTTPS traffic
- B. Provides shared storage
- C. Provides shared printing
- D. Provides IP addresses on demand
- E. Translates domain names into IP addresses
- F. An intermediary between a LAN and the Internet that caches pages for reuse
- G. May support SMTP and POP3 or SMTP and IMAP protocols
- H. Examines and verifies or denies credentials to users logging into a secured network.

Answers

1. H
2. D
3. E
4. B
5. G
6. C
7. F
8. A