CH2: Underlying Technologies

1. What are the two types of packet switching?

Choices:

A. Datagram and Packet Loss

B. Virtual Circuit and Datagram

C. Path Selection and Routing Table

D. TCP and UDP

Answer: B - Virtual Circuit and Datagram

Explanation: Packet switching involves dividing communication into packets. In a virtual circuit, the path is preselected for the entire communication, while in datagram switching, the path is not predetermined and is dynamically decided for each packet.

2. What is the primary role of a router?

Choices:

A. Connect computers within a single network

B. Interconnect two or more networks

C. Store and forward emails

D. Provide internet access to devices

Answer: B - Interconnect two or more networks

Explanation: Routers are small computers that connect multiple networks, enabling communication and data transmission between them using packet-switching functionality.

3. What does TCP/IP stand for?

Choices:

A. Transmission Control Protocol/Internet Protocol

B. Terminal Control Protocol/Input Protocol

C. Transfer Communication Protocol/Interface Protocol

D. Technology Control Process/Internet Provider

Answer: A - Transmission Control Protocol/Internet Protocol

Explanation: TCP/IP is the fundamental communication protocol suite for the Internet, enabling reliable data transfer and addressing between devices.

4. What is a socket?

Choices:

A. An IP address and port number combined

B. A communication endpoint for TCP/IP connections

C. A device for connecting physical networks

D. Both A and B

Answer: D - Both A and B

Explanation: A socket is a combination of an IP address and port number, serving as a communication endpoint for establishing TCP/IP connections.

5. What is the definition of a client in a network?

Choices:

A. A server that provides services

B. A computer requesting services from a server

C. A device for routing network packets

D. A standalone program for managing domains

Answer: B - A computer requesting services from a server

Explanation: A client is any device or program that sends requests to a server to access resources or services.

CH3: DNS Servers

6. What is the main purpose of DNS servers?

Choices:

A. Map domain names into IP addresses

B. Perform reverse IP address lookups

C. Provide alternative DNS servers

D. All of the above

Answer: D - All of the above

Explanation: DNS servers are essential for translating human-readable domain names into IP addresses. They also provide reverse lookups and alternative server mappings in cases of missing or invalid data.

7. How does a DNS server handle mapping requests when it lacks the necessary information?

Choices:

A. Forwards the request to an alternate DNS server

B. Sends an error message to the client

C. Logs the error and retries automatically

D. Both A and B

Answer: D - Both A and B

Explanation: A DNS server forwards requests to alternate DNS servers if it lacks the mapping information and sends an error message if mapping is not possible.

CH4: Server Basics

8. What is the primary requirement for a computer to act as a server?

Choices:

A. A large physical storage capacity

B. Sufficient power, speed, and storage to handle multiple client requests

C. A dedicated IP address

D. A graphical user interface for management

Answer: B - Sufficient power, speed, and storage to handle multiple client requests

Explanation: A server needs enough resources to efficiently process and respond to multiple client requests simultaneously.

CH5: Web Servers

9. Which of the following is true about Apache web servers?

Choices:

A. Only works on Windows OS

B. Provides good technical support

C. Allows remote administration

D. Proprietary software

Answer: C - Allows remote administration

Explanation: Apache web servers are open-source and support multiple platforms. They allow remote administration and are widely used in the industry due to their flexibility and cost-effectiveness.

10. What is the main advantage of using a virtual host?

Choices:

A. Increased hardware requirements

B. Cost-effectiveness

C. Improved security

D. Simplified network configuration

Answer: B - Cost-effectiveness

Explanation: Virtual hosting allows multiple domain names to share a single server or IP address, reducing the cost and resources required for hosting websites.

11. What is one disadvantage of using IIS (Internet Information Services) as a web server?

Choices:

A. It lacks a graphical user interface

B. It is only compatible with the Windows operating system

C. It does not support password-protected pages

D. It is an open-source application

Answer: B - It is only compatible with the Windows operating system

Explanation: IIS is tightly integrated with the Windows OS, limiting its use to systems running Windows.

12. What is a key advantage of using the Apache web server?

Choices:

A. Proprietary software with frequent updates

B. No real technical support available

C. Open-source and free of cost

D. Requires minimal technical knowledge to configure

Answer: C - Open-source and free of cost

Explanation: Apache is widely used because it is open-source, free, and supports multi-platform compatibility.

CH HTTP: Plug-ins and Cookies

13. What is the main difference between a plug-in and a helper application?

Choices:

A. Plug-ins are standalone applications, while helper applications integrate with browsers

B. Plug-ins run within the browser process, while helper applications run separately

C. Plug-ins are faster than helper applications

D. Plug-ins and helper applications serve the same function

Answer: B - Plug-ins run within the browser process, while helper applications run separately

Explanation: Plug-ins extend browser functionality by running within its process, whereas helper applications operate as independent programs to handle specialized file types or tasks.

14. What is a cookie?

Choices:

A. A small piece of information stored on the server side

B. A file stored on the client side for tracking purposes

C. A type of malware for extracting user data

D. A method of encrypting browser communication

Answer: B - A file stored on the client side for tracking purposes

Explanation: Cookies are small data files stored on a user's computer by a website to remember preferences or track user activity across sessions.

15. What happens when too many requests come to the CPU?

Choices:

A. The CPU caches all requests for later processing

B. A single cache holds all data

C. The system crashes immediately

D. Use a front-end queue and shared memory multiprocessors

Answer: D - Use a front-end queue and shared memory multiprocessors

Explanation: Front-end systems and shared memory multiprocessors distribute incoming requests effectively, preventing CPU overload and ensuring smooth operation.

CH DOM: Document Object Model

16. Which of the following are main components of the DOM?

Choices:

A. Nodes, Methods, and Classes

B. Properties, Methods, and Events

C. Objects, Methods, and Attributes

D. Properties, Classes, and Events

Answer: B - Properties, Methods, and Events

Explanation: The DOM consists of properties (data elements of objects), methods (actions objects can perform), and events (specific actions that objects can respond to, such as clicks).

17. Which of the following is an example of a DOM property?

Choices:

A. write()

B. onClick

C. bgcolor

D. alert()

Answer: C - bgcolor

Explanation: bgcolor is a property of the DOM that specifies the background color of an element.

18. What is the purpose of DOM events?

Choices:

A. To manipulate data in the DOM

B. To enable user interaction with objects

C. To define attributes of an object

D. To add additional CSS styles

Answer: B - To enable user interaction with objects

Explanation: DOM events allow elements to respond to user actions such as clicks, changes, or key presses.

19. What is virtual hosting?

Choices:

A. Hosting multiple websites on different servers

B. Hosting multiple websites on the same computer or IP address

C. A process for increasing server bandwidth

D. A method for storing multiple domains in a database

Answer: B - Hosting multiple websites on the same computer or IP address

Explanation: Virtual hosting enables cost-effective management by allowing multiple domain names to share server resources.