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## Chapter 1 Solutions

### Review Questions

1. Which of the following is a basic function a computer performs? (Choose all that apply.)
  - a. **Processing**
  - b. Internet access
  - c. **Input**
  - d. Graphics
  - e. **Output**
  - f. E-mail
2. The \_\_\_\_\_ executes instructions provided by computer programs.
  - a. **CPU**
  - b. NIC
  - c. Hard drive
  - d. USB
3. When a CPU has two or more processors, each one is referred to as a(n) \_\_\_\_\_.
  - a. I/O
  - b. **Core**
  - c. OS
  - d. Flash
4. Which of the following is considered long-term storage? (Choose all that apply.)
  - a. **USB or flash drive**
  - b. RAM
  - c. Working storage
  - d. **Hard drive**
5. Which motherboard component controls data transfers between memory, expansion slots, I/O devices, and the CPU?
  - a. RAM slots
  - b. IDE connectors
  - c. **Chipset**
  - d. PCI-Express
6. You want to purchase a high-performance graphics card for your computer. Which type of connector should it have?
  - a. PCI
  - b. SATA
  - c. IDE
  - d. **PCI-Express**
7. The time it takes for read/write heads to move to the correct spot on the platter is the \_\_\_\_\_.

- a. Rotational delay
  - b. Seek time**
  - c. Transfer time
  - d. Access time
8. Which of the following is a task usually performed by the BIOS? (Choose all that apply.)
- a. Perform a POST.**
  - b. Create an interrupt.
  - c. Store the operating system.
  - d. Begin the boot procedure.**
9. Place the following steps of the boot procedure in order.
- a. The OS is loaded into RAM.
  - b. CPU starts.
  - c. OS services are started.
  - d. Power is applied.
  - e. The POST is executed.
  - f. Boot devices are searched.

Answer: d, b, e, f, a, c

10. You have just installed a new NIC in your PC to replace the old one that had started malfunctioning. What additional software must be installed to allow the OS to communicate with the new NIC?
- a. Network application
  - b. Device driver**
  - c. BIOS
  - d. Protocol
11. Which of the following requests information stored on another computer?
- a. NIC
  - b. Network client**
  - c. Network server
  - d. Network protocol
  - e. Device driver
12. Choose the correct order for the process of a user attempting to access network resources:
- 1. Network protocol
  - 2. Application
  - 3. Network client
  - 4. NIC driver
- a. 4, 2, 1, 3
  - b. 3, 2, 1, 4
  - c. 1, 4, 2, 3
  - d. 2, 3, 1, 4**

- e. 3, 1, 2, 4
- 13. TCP/IP is an example of which of the following?
  - a. NIC
  - b. Network client
  - c. Network server
  - d. Network protocol**
  - e. Device driver
- 14. In network communication, the \_\_\_\_\_ address is used to deliver a frame to the correct computer on the network. (Choose all that apply.)
  - a. MAC**
  - b. Logical
  - c. IP
  - d. Physical**
- 15. A(n) \_\_\_\_\_ message is used to determine whether a computer is listening on the network.
  - a. MAC
  - b. Ping**
  - c. IP
  - d. TCP
- 16. TCP/IP uses \_\_\_\_\_ to look up a computer's IP address, given its name.
  - a. DNS**
  - b. Ping
  - c. MAC
  - d. TCP
- 17. The unit of information containing MAC addresses and an error-checking code that's processed by the network interface layer is called a \_\_\_\_\_.
  - a. Packet
  - b. Ping
  - c. Frame**
  - d. Chunk
- 18. Data is processed from the time an application creates it to the time it reaches the network medium. This process includes adding information such as addresses and is called which of the following?
  - a. Packetization
  - b. Encapsulation**
  - c. Deencapsulation
  - d. Layering
- 19. You're the network administrator for a company that has just expanded from one floor to two floors of a large building, and the number of workstations you need has doubled from 50 to 100. You're concerned that network performance will suffer if you add computers to the existing LAN. In addition, new users will be working in a

separate business unit, and there are reasons to logically separate the two groups of computers. What type of network should you configure?

- a. WAN
- b. MAN
- c. Internetwork**
- d. Extended LAN

20. Which of the following best describes a client?

- a. A computer's primary role in the network is to give other computers access to network resources and services.
- b. A computer's primary role in the network is to run user applications and access network resources.**
- c. It's the software that responds to requests for network resources.
- d. The OS installed on a computer is designed mainly to share network resources.

21. You work for a small company with four users who need to share information on their computers. The budget is tight, so the network must be as inexpensive as possible. What type of network should you install?

- a. Server-based network
- b. Peer-to-peer network**
- c. Wide area network
- d. Storage area network

22. Which of the following characteristics is associated with a peer-to-peer network? (Choose all that apply.)

- a. Decentralized data storage**
- b. Inexpensive**
- c. User-managed resources**
- d. Centralized control
- e. Uses a directory service

23. A device interconnects five computers and a printer in a single office so that users can share the printer. This configuration is an example of which of the following?

- a. LAN**
- b. MAN
- c. WAN
- d. Internetwork

24. A company has just made an agreement with another organization to share their two networks' resources by using TCP/IP protocols. What best describes this arrangement?

- a. MAN
- b. LAN
- c. Intranet
- d. Extranet**

25. You have installed Windows Server 2012 on a new server and want to centralize user logons and security policies. What type of software should you install and configure on this server?

- a. Naming services
  - b. Application services
  - c. Communication services
  - d. **Directory services**
26. Peer-to-peer networks aren't suitable in which of the following situations?
- a. **Tight security is required.**
  - b. Five or fewer users need network access.
  - c. Budget is the primary consideration.
  - d. No one uses the network heavily.

## Hands-On Projects

### Hands-On Project 1-1

Step 2: Steps of the boot procedure:

1. Power is applied to the motherboard.
2. CPU starts.
3. CPU carries out BIOS startup routines, include the POST.

Step 5: Final steps of the boot procedure:

4. Boot devices are searched for an OS.
5. The OS is loaded into RAM.
6. OS services are started.

### Hands-On Project 1-3

Step 5:

- Word-processing program: User application
- NIC displayed in the "Connect using" text box: Network interface
- Client for Microsoft Networks: Network software
- File and Printer Sharing for Microsoft Networks: Network software
- Internet Protocol Version 4: Network protocol

### Hands-On Project 1-5

Step 2: workgroup, peer-to-peer

### Hands-On Project 1-6

Step 9: peer-to-peer

## Case Projects

### Case Project 1-1

A server-based network is the best choice. A peer-to-peer network might work for now, but when new employees are hired, a peer-to-peer network would be too difficult to manage. The key is that easy backup and centralized storage for files point to a server-based network.

### **Case Project 1-2**

Because employees must be able to control access to their own resources, a peer-to-peer model works best. Supplies will likely include NICs, cabling, and a switch. Students should state they need to configure file shares and possibly create user accounts on the computers to allow access by other users. They might also need to configure IP address settings.

### **Case Project 1-3**

An internetwork is called for because LANs in the same building are being connected. A router is probably needed for communication between LANs on the two floors.

### **Case Project 1-4**

Answers will vary.