
Chapter 1 Solutions

Review Questions

- Which of the following is one of the three basic functions a computer performs? (Choose all that apply.)
 - Processing
 - Input
 - Output
- The _____ executes instructions provided by computer programs.
 - CPU
- When a CPU is composed of two or more processors, each one is referred to as a(n) _____.
 - Core
- Which of the following is considered long-term storage? (Choose all that apply.)
 - Flash drive
 - Hard drive
- Which motherboard component controls data transfers between memory, expansion slots, I/O devices, and the CPU?
 - Chipset
- You want to purchase a new high-performance graphics card for your computer. Which type of connector should it have?
 - PCI-Express
- The time it takes for read/write heads to move to the correct spot on the platter is the _____.
 - Seek time
- Which of the following is a task usually performed by the BIOS? (Choose all that apply.)
 - Perform a POST.
 - Begin the boot procedure.
- Place the following steps of the boot procedure in order.
 - The OS is loaded into RAM.
 - CPU starts.
 - OS services are started.
 - Power is applied.
 - The POST is executed.
 - Boot devices are searched.

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

10. Which of the following is a critical service provided by the OS? (Choose all that apply.)
 - b. Memory management
 - d. File system
11. An OS's capability to run more than one application or process at the same time is referred to which of the following?
 - c. Multitasking
12. 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?
 - b. Device driver
13. Which of the following requests information stored on another computer?
 - b. Network client
14. 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
 - d. 2, 3, 1, 4
15. TCP/IP is an example of which of the following?
 - d. Network protocol
16. In network communication, the _____ address is used to deliver a frame to the correct computer on the network. (Choose all that apply.)
 - a. MAC
 - d. Physical
17. A(n) _____ message is used to determine whether a computer is listening on the network.
 - b. Ping
18. TCP/IP uses _____ to look up a computer's IP address, given its name.
 - a. DNS
19. The unit of information containing MAC addresses and an error-checking code that's processed by the network interface layer is referred to as a _____.
 - c. Frame
20. 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?
 - b. Encapsulation
21. 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 your 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?

c. Internetwork

22. Which of the following best describes a client?

b. A computer's primary role in the network is to run user applications and access network resources.

23. 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?

b. Peer-to-peer network

24. 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

25. 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

26. At Yavapai College, the Prescott and Prescott Valley campuses (8 miles apart) have LANs connected via the local phone company. This configuration is an example of which of the following? (Choose the best answer.)

a. MAN

27. You have installed Windows Server 2008 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?

d. Directory services

28. Peer-to-peer networks aren't suitable in which of the following situations?

a. Tight security is required.

29. Which of the following best describes a storage area network?

b. Uses high-speed networking technologies to give servers fast access to large amounts of disk storage

30. Why might Windows 7 or Windows Vista require more RAM or disk space than Windows Server 2008?

d. They support a graphics-intensive user interface.

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 10: File sharing, 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, although self-configuring addresses could be used.

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

A personal area network (PAN)

Case Project 1-5

Answers will vary.