Computers Are Your Future

Chapter 4

System Software

# Answers to End-of-Chapter Questions

## Matching

\_\_**h**\_\_\_1.virtual memory “Managing Memory”

\_\_**k**\_\_\_2.driver “Starting the Computer”

\_\_**f**\_\_\_3.registry “Starting the Computer”

\_\_**a**\_\_\_4.archive “File Compression Utilities”

\_\_**o**\_\_\_5.gadget “Microsoft Windows”

\_\_**i**\_\_\_6.booting “Starting the Computer”

\_\_**n**\_\_\_7. graphical user interface (GUI) “Providing the User Interface”

\_\_**c**\_\_\_8.profile “Starting the Computer”

\_\_**m**\_\_\_9.loading “Starting the Computer”

\_\_**d**\_\_\_10 bad sector “Scanning and Defragmenting Disks”

\_\_**e**\_\_\_11.incremental backup “Backup Software”

\_\_**b**\_\_\_12.menu driven “Providing the User Interface”

\_\_**l**\_\_\_13.authentication “Starting the Computer”

\_\_**g**\_\_\_14.command line “Providing the User Interface”

\_\_**j**\_\_\_15.full backup “Backup Software”

**Multiple Choice**

1. Which OS is specially designed for smartphones and PDAs?

a. Windows XP

b. Windows Vista

c. Mac OS X

**d. Windows Mobile** “Microsoft Windows”

2. What utility program reduces a file size by as much as 80 percent by substituting short codes for lengthy data patterns?

a. Defragmentation

**b. Compression** “File Compression Utilities”

c. Interrupt

d. Cleanup

3. Which of the following is not an OS function?

**a. Creating documents and spreadsheets** “The Operating System”

b. Managing memory

c. Starting the computer

d. Providing the user interface

4. Which OS is least likely to be used on a home computer?

a. Windows Vista

**b. Windows CE** “Microsoft Windows”

c. Linux

d. Mac OS X

5. Virtual memory is used when:

a. booting fails.

b. an IRQ conflict occurs.

**c. RAM is full.** “Managing Memory”

d. a power-on self-test fails.

6. What happens when a warm boot is performed?

**a. A computer that is already on restarts. “**Starting the Computer”

b. A swap file is created.

c. A computer that is not already on starts up.

d. Preemptive multitasking occurs.

7. In virtual memory, what are program instructions and data divided into?

a. Drivers

**b. Pages** “Managing Memory”

c. IRQs

d. Archives

8. Which system utility creates duplicates of the files and programs on a system?

a. Compression

b. Defragmentation

**c. Backup** “Backup Software”

d. Driver

9. Which term describes all the programs needed for a computer and its peripheral devices to function properly?

a. Operating system

b. BIOS

c. System utilities

**d. System software** “Chapter Introduction”

10. Which tool creates a System Stability Chart to help diagnose performance problems in Windows 7?

a. Windows Update

b. Disk defragmentation tool

**c. Reliability Monitor** “Troubleshooting”

d. Performance Monitor

**Fill-In**

1. \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ automatically installs fixes and service patches to maintain a computer’s security and reliability.

**Windows Update** “System Update”

2. Windows Explorer and Mac Finder are examples of a(n) \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ utility.

**file management** “Searching for and Managing Files”

3. \_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_ is an example of a Microsoft OS that uses a command-line user interface.

**MS-DOS** “MS-DOS”

4. \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ is an environment in which programs that are running receive a recurring slice of time from the CPU.

**Preemptive multitasking** “Managing Applications”

5. A device \_\_\_\_\_\_\_\_\_ is a program that enables communication between the operating system and a peripheral device.

**driver** “Starting the Computer”

6. In a graphical user interface, a(n) \_\_\_\_\_\_ is used to represent computer resources such as programs and files.

**icon** “Providing the User Interface”

7.\_\_\_\_\_\_\_\_\_ mode is a low-power alternative to shutting down a computer.

**Sleep** “Troubleshooting”

8. The \_\_\_\_\_\_, or login, process verifies that the user is authorized to use the computer.

**authentication** “Starting the Computer”

9. The first step in starting a computer is to load the \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_.

**operating system** “The Operating System”

10. The POST, or \_\_\_\_\_\_-\_\_\_\_\_\_ \_\_\_\_\_\_-\_\_\_\_\_\_, makes sure the computer and its peripherals are working correctly during the start-up process.

**power-on self test** “Starting the Computer”

11. \_\_\_\_\_\_\_\_\_\_\_\_\_ is the name of the most current Windows operating system for a PC.

**Windows 7** “Microsoft Windows”

12. A(n) \_\_\_\_\_\_ operating system permits users to work with more than one program at the same time.

**multitasking** “Managing Applications”

13. A(n) \_\_\_\_\_\_ is determined by the combination of microprocessor chip and operating system used by a computer.

**platform** “PC Versus Mac Versus Linux”

14. Linux makes its source code available for everyone to see and use. This is an example of \_\_\_\_\_\_ \_\_\_\_\_\_\_\_ software.

**open source** “Linux”

15. \_\_\_\_\_\_ \_\_\_\_\_\_ is an operating mode in which a minimal set of drivers is loaded, usually to help resolve configuration problems.

**Safe mode** “Troubleshooting”

**Short Answer**

1. Explain the difference between performing a cold and warm boot. How is a warm boot executed? What activities are not performed during a warm boot?

**With a cold boot, you start a computer that is not already on. With a warm boot, you restart a computer that is already on. Warm boots are often necessary after installing new software or after an application crashes or stops working. In Windows, you can initiate a warm boot by simultaneously pressing the Ctrl + Alt + Del keys and then choosing the Restart option from the Shut Down menu. (On the Mac, the system will restart when you press the Control, Command, and Eject keys at the same time.) A warm boot, sometimes referred to as restart, can also be initiated through the Start button in Windows and the Apple menu on the Mac.**

**A warm boot does not require the machine to be turned off or shut down.**

2. List at least three improvements that Windows 7 offers its customers over Windows Vista.

**All versions of Windows 7 promise to be more efficient than their predecessor, performing equally or better on the same hardware, and claim to have resolved the compatibility issues that existed between applications. Some improvements include:**

* **Improved desktop navigation, including Windows Touch**
* **Starting programs faster**
* **Faster, easier, and safer Web experiences**
* **Ability to watch TV on your PC**
* **Ability to create a home network with HomeGroup**
* **Ability to connect to company networks more easily and with more security**
* **Improved backup of a home or business network**
* **Ability to run Windows XP productivity programs in XP mode**
* **Use of BitLocker to protect data on a PC and storage devices**
* **Ability to work in one of 35 languages**

3. What is the difference between shutting down your computer and putting it into sleep mode? What are the advantages to sleep mode? Are there any disadvantages?

**Sleep mode actually transfers the current state of your computer to both memory and the computer’s hard disk. An advantage to sleep mode is that returning from sleep mode is faster than hibernate or standby because of the state of the computer being held in memory. If the system shuts down for any reason, sleep mode also saves all the information in memory (including the state information) to the computer’s hard disk so that there is no risk of losing unsaved information. Settings for sleep mode can be altered through the Control Panel’s Power Options selection.**

**A disadvantage to sleep mode is that if a PC loses power while in sleep mode, the contents of RAM will be erased, and data will be lost.**

4. List three utilities that are installed with the Windows 7 operating system. Provide a brief description of what each utility does and how it is activated.

**Some utilities installed in Windows 7 are:**

* **Backup. Backup software can run a full backup or an incremental backup. It can be accessed from the Backup and Resource Center on the Control Panel.**
* **File Manager. File manager is a program that helps you organize and manage the data stored on your disk. In Windows 7, it is called Explorer.**
* **Disk Cleanup. A disk cleanup program improves system performance and increases storage space by removing files you no longer need. The Disk Cleanup tool can be found under System Tools.**
* **Disk Defragmentation Program. A disk defragmenter reorganizes data on the disk so that the file pieces are reassembled as one chunk of disk space. The Disk Defragmenter is set to run automatically in Windows 7 but can be changed by selecting System Tools.**
* **File Compression. File compression programs enable you to create archive and compressed files. To Compress a file in Windows 7, right-click it and choose Send To Compressed (zipped) Folder.**

5. Explain the differences between a full backup and an incremental backup. Have you ever lost important files because you did not back them up? If you have done a backup, did you copy the entire disk or just selected files? When was the last time you performed a backup?

**Backup software can run a full backup, which includes all files and data on the entire hard disk, or an incremental backup. In an incremental backup, the backup software copies only those files that have been created or changed since the last backup occurred. In this way, the backup disk always contains an up-to-date copy of all data. Full backups should be made at least once each month. Incremental backups should be made regularly, too—in a business environment, at least once a day.**