**Storage: Location in which data, instructions, and information are held for future use.**

**A storage medium (media is the plural), also called Secondary storage: The physical material on which a computer keeps data, instructions, and information.**

**Capacity: Number of bytes a storage medium can hold.**

**Hard disk: Type of storage device that contains one or more inflexible, circular platters that use magnetic particles to store data, instructions, and information.**

**Thousandths of a second (milliseconds) or millionths of a second (microseconds)**

**Perpendicular recording: Storage technique in which magnetic particles are aligned vertically, or perpendicular to the disk's surface, making much greater storage capacities possible.**

**Longitudinal recording: Storage technique in which magnetic particles are aligned horizontally around the surface of the disk.**

**Cloud storage: Internet service that provides storage to computer users.**

**Optical disc: Type of storage medium that consists of a flat, round, portable disc made of metal, plastic, and lacquer that is written on and read by a laser.**

**System software: Programs that control or maintain the operations of a computer and its devices.**

**Operating system (OS): Set of programs containing instructions that work together to coordinate all the activities among computer hardware devices.**

**Utility program: Type of system software that allows a user to perform maintenance-type tasks usually related to managing a computer, its devices, or its programs.**

**Warm boot: Process of using the operating system to restart a computer.**

**Booting: Process of starting or restarting a computer.**

**Kernel: The core of an operating system that manages memory and devices, maintains the computer's clock, starts programs, and assigns the computer's resources.**

**BIOS: Basic input/output system; firmware that contains the computer's startup instructions.**

**User interface: The portion of software that defines how a user interacts with a computer, including how the user enters data and instructions and how information is displayed on the screen.**

**Graphical user interface (GUI): Type of user interface that allows a user to interact with software using text, graphics, and visual images, such as icons.**

**Boot drive: Drive from which a personal computer boots (starts).**

**Automatic update: Operating system feature that automatically provides updates to a program.**

**A single user/multitasking operating system allows a single user to work on two or more programs that reside in memory at the same time. With preemptive multitasking, the operating system interrupts a program that is executing and passes control to another program waiting to be executed.**

**Registry: Several files that contain the system configuration information.**

**Startup folder: Contains a list of programs that open automatically when you boot a computer.**

**Recovery disk: Special disk that contains a few system files capable of restarting a computer, which is used when the computer cannot boot from its hard disk. See also boot disk.**

**Server: Computer that controls access to the hardware, software, and other resources on a network and provides a centralized storage area for programs, data, and information. See also host computer.**

**Communications: Process in which two or more computers or devices transfer data, instructions, and information.**

**Network: Collection of computers and devices connected together via communications devices and transmission media, allowing computers to share resources.**

**Cluster: Smallest unit of disk space that stores data and information. See also allocation unit.**

**Access time: Measurement of the amount of time it takes the process to read data, instructions, and information from memory.**

**DVD+RW: Rewritable DVD format with capacities up to 4.7 GB per side.**

**DVD-ROM: High-capacity optical disc on which users can read, but not write or erase. See also digital versatile disc-read-only memory and digital video disc-read-only memory.**

**A solid state drive (SSD) is a storage device that typically uses flash memory to store data, instructions, and information**

**1. Disk recording consists of a memory chip(s) on a hard disk that stores frequently accessed items.**

**2. Hard disks contain one or more inflexible, circular platters that magnetically store data, instructions, and information.**

**3. SATA is a hard disk interface that uses parallel signals to transfer data, instructions, and information.**

**4. Storage media is the computer hardware that records and/or retrieves items to and from a storage device.**

**5. Users can move an internal hard disk from computer to computer as needed by connecting the disk to a USB port or FireWire port on the system unit.**

**1. Cloud storage is a storage device that typically uses flash memory to store data, instructions, and information.**

**2. A USB flash drive is a flash memory storage device that plugs in a parallel port on a computer or mobile device.**

**3. Flash memory cards are a type of magnetic media, which means they consist entirely of electronic components and contain no moving parts.**

**4. An ExpressCard module is a removable device that fits in an ExpressCard slot.**

**1. A CD-RW is a type of optical disc on which users can read but not write (record) or erase.**

**2. A DVD-RAM is a single-session disc that stores digital versions of film using a jpg file format.**

**3. DVDs have the same storage capacities as CDs.**

**4. Optical discs are written and read by mirrors.**

**5. Single session means you can write on part of the disc at one time and another part at a later time.**

**6. Microfilm and microfiche have the longest life of any media.**

**Quiz Yourself 7-1**

**1. Disk recordingcaching consists of a memory chip(s) on a hard disk that stores frequently accessed items.**

**2. True Statement**

**3. SATA is a hard disk interface that uses parallelserial signals to transfer data, instructions, and information.**

**4. Storage mediaA storage device is the computer hardware that records and/or retrieves items to and from a storage devicemedia.**

**5. Users can move an internalexternal hard disk from computer to computer as needed by connecting the disk to a USB port or FireWire port on the system unit.**

**Quiz Yourself 7-2**

**1. Cloud storageA solid state drive (SSD) is a storage device that typically uses fl ash memory to store data, instructions, and information.**

**2. A USB fl ash drive is a fl ash memory storage device that plugs in a parallel USB port on a computer or mobile device.**

**3. Flash memory cards are a type of magneticsolid state media, which means they consist entirely of electronic components and contain no moving parts.**

**4. True Statement**

**Quiz Yourself 7-3**

**1. A CD-RWCD-ROM is a type of optical disc on which users can read but not write (record) or erase.**

**2. A DVD-RAMPicture CD is a single-session disc that stores digital versions of fi lm using a jpg fi le format.**

**3. DVDs have the samemuch greater storage capacities asthan CDs.**

**4. Optical discs are written and read by mirrorsa laser.**

**5. Single sessionMultisession means you can write on part of the disc at one time and another part at a later time.**

**6. True Statement**

**An ExpressCard module is a removable device, about 75 mm long and 34 mm wide or \_\_\_\_ with a width of 54 mm. a. L-shaped**

**The SATA hard disk interface uses \_\_\_\_ to transfer data, instructions, and information. a. serial signals**

**Formatting is the process of dividing the disk into tracks and \_\_\_\_, so that the operating system can store and locate data and information on the disk.c. sectors**

**A platter is made of aluminum, glass, or ceramic and is coated with a(n) \_\_\_\_ material that allows items to be recorded magnetically on its surface.  d. alloy 合金**

**Flash memory is a type of \_\_\_\_ memory that can be erased electronically and rewritten.d. nonvolatile**

**A(n) \_\_\_\_ is a device that reads and writes data, instructions, and information stored on memory cards.  c. card reader/writer**

**An external hard disk is a separate free-standing hard disk that connects with a cable to a USB port or \_\_\_\_ port on the system unit.a. FireWire**

**IBM's Project Quicksilver is breaking new ground by achieving data transfer speeds of more than \_\_\_\_ input/output operations per second.a. one million**

**Microfilm has a potential life expectancy of \_\_\_\_ years.  d. 500**

**ExpressCard modules are available in \_\_\_\_ sizes.  a. two**

**The spinning motion of the hard disk creates a cushion of air between the platter and its \_\_\_\_.c. read/write head**

**When writing or reading specific data, direct access is much faster than \_\_\_\_.  a. sequential access顺序访问**

**When a user issues a command to start application software, the operating system locates the program in \_\_\_\_ and loads it into memory.  b. storage**

**IDrive and \_\_\_\_ provide backup or additional storage for any type of file.  c. Windows Live SkyDrive**

**In their personal computer advertisements, vendors usually state the type of hard disk interface supported by the \_\_\_\_.  c. hard disk controller**

**A storage medium is the \_\_\_\_on which a computer keeps data, instructions, and information.  c. physical material**

**CD-RW drives have write speeds of \_\_\_\_ or more.  c. 52X**

**Manufacturers claim that a properly cared for high-quality optical disc will last five years but could last up to \_\_\_\_ years.  d. 100**

**Hard disks improve their access time by using \_\_\_\_.  c. disk cache**

**A typical hard disk has multiple \_\_\_\_ stacked on top of one another.  b. platters**

**EIDE is a hard disk interface that uses \_\_\_\_ to transfer data, instructions, and information.  b. parallel signals**

**Administrators can specify that data be \_\_\_\_ as it travels over a network to prevent unauthorized users from reading the data.  
a. encrypted加密**

**A buffer is a segment of memory or \_\_\_\_ in which items are placed while waiting to be transferred from an input device or to an output device. c. storage**

**CMOS is a technology that uses \_\_\_\_ to retain information when the computer is off.a. battery power**

**To configure devices, manage system resources, and troubleshoot network connections, network administrators and other advanced users work with a \_\_\_\_.b. command-line interface**

**Some parts of the operating system are \_\_\_\_, that is, these instructions remain on a storage medium until they are needed.  
b. nonresident**

**To run Windows 7 Home Premium, your computer must have at least \_\_\_\_ of RAM.c. 1 GB**

**In addition to being a stand-alone operating system, \_\_\_\_ also is a server operating system.d. UNIX**

**Examples of server operating systems include Windows Server 2008, UNIX, Linux, Solaris, and \_\_\_\_.a. NetWare**

**Apple's Macintosh operating system has set the standard for operating system ease of use and has been the model for most of the new \_\_\_\_ developed for other systems.a. GUIs**

**Windows Server 2008 Enterprise is part of the \_\_\_\_ family.d. Windows Server 2008**

**Windows Mobile is an operating system based on \_\_\_\_.a. Windows Embedded CE**

**Most users choose one of these Windows 7 editions: Windows 7 Starter, Windows 7 Home Premium, Windows 7 Ultimate, or \_\_\_\_.  
b. Windows 7 Professional**

**The client portion of \_\_\_\_ resides on each client computer connected to the network.a. NetWare**

**Examples of currently used stand-alone operating systems are Windows 7, Mac OS X, UNIX, and \_\_\_\_.d. Linux**

**The operating system on mobile devices and many consumer electronics, called a(n) \_\_\_\_ operating system, resides on a ROM chip.c. embedded**

**A hacker is someone who tries to access a computer or network \_\_\_\_.b. illegally**

**The uninstaller deletes files and folders from the hard disk, as well as removes program entries from the \_\_\_\_.b. system files**

**A \_\_\_\_, such as Sasser or Klez, copies itself repeatedly, for example, in memory or over a network, using up system resources and c. worm**

**A(n) \_\_\_\_ is a type of system software that allows a user to perform maintenance-type tasks, usually related to managing a   
c. utility program**

**Norton SystemWorks is a popular personal computer \_\_\_\_ designed for Windows operating systems.c. maintenance utility**

**To uncompress解压缩, or \_\_\_\_, a file, you restore it to its original form.c. unzip**

**Fragmentation碎片 \_\_\_\_ access and thus the performance of the entire computer.b. slows down disk**

**Spyware is a program placed on a computer without the user's knowledge that secretly collects information about the user, often related to \_\_\_\_.a. Web browsing habits**

**One of the functions that a(n) \_\_\_\_ performs is displaying a list of files on a storage medium.d. file manager**

**Although ghosting is not as severe of a problem with today's displays, manufacturers continue to recommend that users install \_\_\_\_.  
a. screen savers屏幕保护**

**Distributions of Linux include the \_\_\_\_ Web browser. b. Mozilla**

**\_\_\_\_ constantly monitor all transmissions to and from a computer.d. Personal firewalls**

**Windows constantly accesses the \_\_\_\_ during the computer's operation for information such as installed hardware and software devices and individual user preferences for mouse speed, passwords, and other information. d. registry注册表**

**Home and small office users easily can set up a network and secure it from hackers with \_\_\_\_. b. Windows Firewall**

**The \_\_\_\_ operating system runs on handheld devices supplied by RIM. d. BlackBerry**

**Android is an operating system designed by \_\_\_\_ for mobile devices. a. Google**

**\_\_\_\_, version of UNIX developed by Sun Microsystems, is a server operating system designed specifically for e-commerce applications.  c. Solaris**

**\_\_\_\_ is a multitasking operating system developed in the early 1970s by scientists at Bell Labs.  c. UNIX**

**Search utilities typically use a(n) \_\_\_\_ to assist with locating files quickly.  d. index**

**In most cases, the operating system is installed and resides on the computer's \_\_\_\_.  d. hard disk**

**PKZIP is a popular stand-alone \_\_\_\_.  c. file compression utility**

**Because they are \_\_\_\_, you usually cannot use backup files in their backed up form. a. compressed**

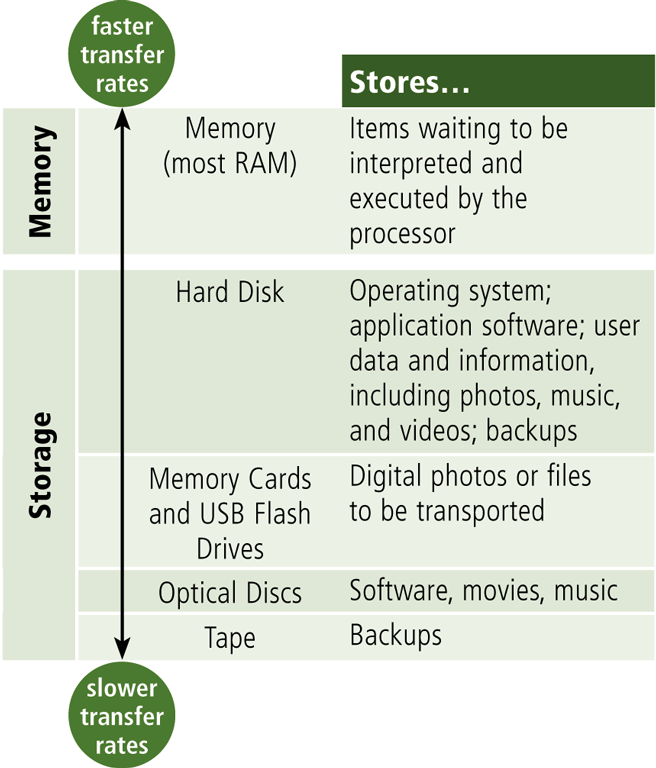
**Some operating systems use \_\_\_\_ to prevent any one process from monopolizing the computer's resources.  
  c. preemptive multitasking**

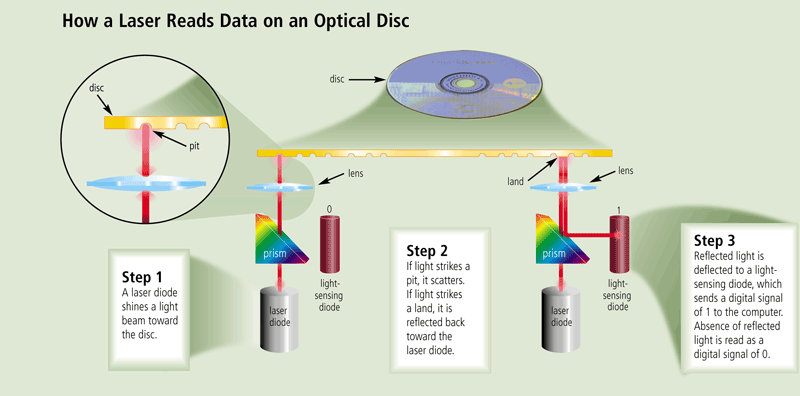
**Windows Server 2008 \_\_\_\_ is appropriate for businesses with huge volumes of transactions and large-scale databases.  d. Datacenter**

**A \_\_\_\_ properly closes any running processes and programs.  d. warm boot**

**\_\_\_\_ is an example of a currently used stand-alone operating system.  a. Mac OS X**

**Each time you boot a computer, the \_\_\_\_ and other frequently used operating system instructions are loaded, or copied, from storage into the computer's memory.  a. kernel**

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