

CGS 2060 Exam 2 Study Guide

Chapter 6

Terms

3D Sound Card - An expansion card that enables a computer to produce sounds that are omnidirectional to produce sounds that are omnidirectional or three dimensional.

Access Time - The time it takes a storage device to locate its stored data.

BD-ROM Disc - Blu-ray Disc Read Only Memory. It is an optical disc storage media format for high-definition video and data storage.

Benchmarks - A measurement used in comparing software and hardware performance. Benchmarks are designed using software applications that are designed to specifically push the limits of computer performance

Bit Depth - The number of bits a video card uses to store data about each pixel on a monitor.

Blu-ray Disc - A method of optical storage for digital data, developed for storing hi-def media.

Cache Memory - Small blocks of memory located next to the CPU chip that act as holding places for recently or frequently used instructions or data that the CPU accesses the most.

Clock Speed - The steady and constant pace at which a computer goes through machine cycles

Core - A complete processing section from a CPU embedded into one physical chip

CPU Usage - The amount of time a Central Processing Unit is working

Data Transfer Rate - The max speed at which data can be transmitted between two nodes on a module.

DVD-RAM - one of the three competing technologies for rewritable CDs

DVD-ROM - DVD format where data can only be read not written

DVD-R/RW - One of 2 recognized DVD formats that enable you to read, record, and rewrite data on a disc.

DVD+R/RW - One of 2 recognized DVD formats that enable you to read, record, and rewrite data on a disc.

External SATA - A form of fast transfer ports that can add external hard drives for more storage space.

Front Side Bus - a device that connects the processor in a computer to the system memory.

Graphics Processing Unit - a specialized logic chip that is dedicated to quickly displaying and calculating visual data such as shadows textures and luminosity

Hard Drive - A device that holds all permanently stored programs and data: located inside the system unit.

Head Crash - Impact of read/write head against magnetic platter of the hard drive; often results in data loss.

Hyperthreading - Technology that permits quicker processing of information by enabling a new set of instructions to start executing before the previous set has finished.

Kernel Memory - The memory a computer's operating system uses.

Latency - The process that occurs after the read/write head of the hard drive locates the correct track, and then waits for the correct sector to spin to the read/write head.

Memory Module - a small circuit board that holds a series of RAM chips.

Moore's Law - a prediction, named after Gordon Moore, the cofounder of Intel that states that the number of transistors on a CPU chip will double every two years.

Nonvolatile Storage - Permanent storage as in read only memory

Optical Media - portable storage devices such as CDs, DVDs, and Blu-ray discs, that use a laser to read and write data

Physical Memory - The amount of RAM a computer possesses

Platter - A thin round metallic storage plate stacked onto the hard drive spindle

Random Access Memory - A computer's temporary storage space or short term memory

Read/Write Head - the mechanism that retrieves and records the magnetic data to and from a data disc.

Serial Advanced Technology Attachment - A type of hard drive that uses much thinner cables and can transfer data more quickly than IDE drives.

Sector - A section of the hard drive platter, wedge shaped from the center of the platter to the edge

Seek Time - The time it takes for the hard drive's read/write heads to move over the surface of the disk, between tracks, to the correct track.

Solid State Drive - A drive that uses the same kind of memory that flash drives use, but can reach data in only one tenth of the time a flash drive requires.

Sound Card - an expansion card that attaches to the motherboard inside the system unit and that enables the computer to produce sounds by providing a connection for the speakers and microphone

Surround Sound - a type of audio processing that makes the listener experience sound as if it were coming from all directions

System Evaluation - The process of looking at a computer's components to determine if it has the right hardware to perform tasks.

Track - a concentric circle that serves as a storage area on a hard drive platter

Video Card - an expansion card installed inside a system to translate binary data into images viewed on the monitor.

Video Memory - RAM included in the video card.

Volatile Storage - Temporary storage in RAM that is cleared out when the computer is shut off.

Activities

Fill in the Blank

Joe already has a PC but just heard about a great deal on a new one. He decides to perform a(n) (1) system evaluation on his computer to see whether he should keep it or buy the new one. First, he runs the Task Manager in Windows. By doing so, he can check the history of (2) CPU usage as he works through his day. Because he is often over 90 percent, he begins to suspect his system is suffering from too little (3) RAM. He has room for an additional two (4) memory modules on his motherboard. Adding memory is something he learned how to do this semester, but would that be enough to make this machine do all he needs?

He visits the Intel Web site to check two other important factors on his model of CPU: the amount of (5) cache memory and the speed of the (6) front side bus. It looks like the newer i7 processor would be much faster overall. It seems each generation of processors is so much faster than the last. That rule, (7) Moore's law, is still holding true!

He continues to evaluate his system by checking out which components he has and which ones he'll need. He notes the storage capacity of the (8) hard drive. Recently, he has been wishing his system had a(n) (9) eSATA port because adding an external hard drive would give him enough space to start to record HD television shows. As it is, he is running out of space to store files. But the (10) access time, or the amount of time it takes to retrieve data from the disk drive, on any