

Answers of Chapter 4

"Discovering Computers 2011 : Living in a Digital World"

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TRUE / FALSE

(T) 1. The system unit is a case that contains electronic components of the computer used to process data.

(F) 2. The processor holds data waiting to be processed and instructions waiting to be executed.

(T) 3. The speed of the system clock is just one factor that influences a computer's performance.

(T) 4. Replacing a motherboard is a fairly complicated process, whereas replacing a processor is much simpler.

(T) 5. A byte is the smallest unit of data the computer can process.

(T) 6. When the computer's power is turned off, volatile memory loses its contents.

(T) 7. Current processors include advanced transfer cache (ATC), a type of L2 cache built directly on the processor chip.

(T) 8. Read-only memory refers to memory chips storing permanent data and instructions.

(F) 9. Hi-Speed USB is a more advanced and faster USB, with speeds 100 times higher than that of its predecessor.

(F) 10. USB 3.0 is more than 10 times faster than USB 2.0.

(F) 11. Both USB 2.0 and USB 3.0 are backward compatible, which means they do not support older USB devices.

__(F)__ 12. SAS (serial-attached SCSI) is a newer type of SCSI that transmits more reliably, but at slower speeds, than parallel SCSI.

Multiple Choice

1. The processor also is called the __(B)__.

- a. motherboard
- b. central processing unit (CPU)
- c. adapter card
- d. chip

2. The __(A)__ is the component of the processor that directs and coordinates most of the operations in the computer.

- a. control unit
- b. arithmetic logic unit
- c. register
- d. machine cycle

3. A processor contains small, high-speed storage locations, called __(B)__, that temporarily hold data and instructions.

- a. flash drives
- b. registers
- c. jacks
- d. heat sinks

4. Supercomputers use __(B)__ for applications such as artificial intelligence and weather forecasting.

- a. system-on-a-chip technology
- b. massively parallel processing
- c. SCSI
- d. Accelerated Graphics Ports

5. ROM chips, called __(C)__, contain permanently written data, instructions, or information.

- a. memory cache b. registers
- c. firmware d. transistors

6. __ (B) __ is an external device that provides connections to peripherals through ports built into the device.

- a. expansion bus b. port replicator
- c. docking station d. synthesizer

7. __ (A) __, which is an external device that attaches to a mobile computer or device, contains a power connection and provides connections to peripherals; it usually also includes slots for memory cards, optical disc drives, and other devices.

- a. docking station b. port replicator
- c. peripheral d. expansion bus

8. __ (D) __ is part of the motherboard and connects the processor to main memory.

- a. expansion bus b. system clock
- c. memory module d. front side bus

Matching

- 1. motherboard - (h). main circuit board of the system unit

2. processor - (a). interprets and carries out the basic instructions that operate a computer
3. vPro technology - (f). provides the capability to track computer hardware and software, diagnose and resolve computer problems, and secure computers from outside threats
4. heat sink - (b). small ceramic or metal component with fins on its surface that absorbs and disperses heat produced by electrical components such as a processor
5. memory - (d). electronic components that store instructions, data, and results of processed data
6. Windows ReadyBoost - (e). can allocate available space on removable flash memory devices as additional cache
7. flash memory - (g). nonvolatile memory that can be erased electronically and rewritten
8. access time - (c). amount of time it takes the processor to read data, instructions, and information from memory
9. USB hub - (i). device that plugs in a USB port on the system unit and contains multiple USB ports in which you plug cables from USB devices
10. backside bus - (j). connects the processor to cache

Short Answer

1. What are two types of designs of Tablet PCs?

-Tablet PCs that have an attached keyboard.

-Tablet PCs that have touch screens.

What are the differences in the designs of the two types of Tablet PCs?

Tablet PCs that have an attached keyboard is for person who prefer typing instead of writing. and vice versa.

2. What is the motherboard?

main circuit board of the system unit

What is a computer chip?

small piece of semiconducting material, usually silicon, on which integrated circuits are etched.

3. What are the four basic operations in a machine cycle?

-fetch

-decode

-execute

-store

What are some functions of registers?

temporarily hold data and instructions.

4. What types of devices might be Bluetooth enabled?

devices that contain a small chip that allows them to communicate with other Bluetooth-enabled computers and devices.

Describe three ways in which a computer can become Bluetooth enabled.

-Using Bluetooth wireless port adapter, that will convert an existing USB port into a Bluetooth port.

- Using Bluetooth PC Cards and ExpressCard modules, for traditional notebook computers and Tablet PCs.

-Using Bluetooth cards, for smart phones and PDAs.

5. What is compressed air used for with regards to caring for your computer?

to removes dust and lint from difficult-to-reach areas; removes sticky liquid spilled on keyboards.

How should you prepare for cleaning your computer?

turn it off, and if necessary, unplug it from the electrical outlet, remove its battery, and disconnect all cables from the ports.