# **Hardware Comprehension Check**

For questions 1-4, match each vocabulary term to the correct definition:

|  |  |
| --- | --- |
| 1. Central Processing Unit (CPU) | a. holds circuits and various chips found inside a computer |
| 2. Hardware | b. the physical parts that make up computers and other electronics |
| 3. Motherboard | c. computer programs |
| 4. Software | d. the main microprocessor of a computer that sends instructions to many other computer parts |

1. Central Processing Unit (CPU) –
2. Hardware –
3. Motherboard –
4. Software –
5. What are input and output devices? Use examples to support your answer.
6. Describe the role of the power supply as a piece of internal hardware. Why does the power supply need fans to operate?
7. Describe the main functions of computer chips, such as processors and memory chips.
8. Compare RAM and ROM memory chips.
9. Compare hard drives and solid state drives.
10. List and describe how the three main types of expansion cards benefit computers.

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1. Central Processing Unit (CPU) – d
2. Hardware – b
3. Motherboard – a
4. Software – c
5. What are input and output devices? Use examples to support your answer.
   1. An input device is one that send information from outside a computer into the computer. Microphones, keyboards, and video game controllers are all examples of input devices. An output device is one that sends information from inside a computer to outside the computer. Monitors and computer speakers are examples of output devices.
6. Describe the role of the power supply as a piece of internal hardware. Why does the power supply need fans to operate?
   1. The power supply is a piece of internal hardware that provides other pieces of hardware with electricity. Fans surround the power supply because running it produces heat and overheating can cause malfunctions with computing devices. Keeping cool air flowing around the power supply makes it less likely for it to overheat.
7. Describe the main functions of computer chips, such as processors and memory chips.
   1. Computer chips can be both internal and external pieces of hardware. They are made of silicon so they can send electric signals through circuits and to the machine. A processor is a special kind of computer chip that performs calculations and carries out instructions for a computer. A memory chip is a special kind of computer chip that stores data, or information.
8. Compare RAM and ROM memory chips.
   1. Both RAM and ROM memory chips are used to store data. RAM stands for Random-Access Memory and temporarily stores data while a computer is being used. When a computer is turned off, RAM will not remember or store any data. ROM (Read-Only Memory), on the other hand, is a type of computer memory that store data long term. Because ROM can remember data even when a computer is off, it is used to hold the computer’s permanent instructions. ROM can also be used to save progress in a game or in a word-processing document.
9. Compare hard drives and solid state drives.
   1. Both hard drives and solid state drives (SSD’s) are used to store data. A hard drive stores data on a disc or a magnetic platter whereas an SSD stores data on a microchip. In general, SSD’s are faster than magnetic hard drives.
10. List and describe how the three main types of expansion cards benefit computers.
    1. Expansion cards are used to enhance a computer’s performance. There are three main types of expansion cards: network, graphics, and audio. Network cards allow the computer to connect to the internet and other computer networks. Graphics cards help the computer process and display graphics. They also improve the quality and speed of picture and video displays. Sound cards turn audio data into analog sounds that then come out of speakers or headphones. Computers do not need expansion cards to function, but they can help boost the computer’s performance.