Lesson 7 Quiz

1. A student shuts down their computer for the night after saving an essay and closing Microsoft Word. Where do the essay file and the Microsoft Word program stay stored while the computer is turned completely off?

A. Inside the CPU, because it is the super high-speed calculator of the computer

B. On a mass storage drive (such as an SSD or hard drive), which holds programs and files when they are not in use

C. Inside the computer's keyboard and mouse, because peripherals store saved documents

D. Nowhere, because turning off a computer permanently deletes all saved programs and files

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2. A student double-clicks the Microsoft Word icon to start typing a letter. Where does the computer load a working copy of Microsoft Word so that the CPU can run it quickly while the student types?

A. Into RAM (Random Access Memory), because it is super fast and holds programs while they are actively running

B. Back onto the spinning platters of the hard drive, because hard drives are faster than the CPU

C. Inside the monitor screen, because the screen processes every keystroke on its own

D. Into a backup USB drive, because RAM can only store files when the computer is turned off

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3. A student looks at a smartphone, a tablet, and a bulky desktop tower and wonders why all three are considered real computers. Based on the lesson, what core hardware components must every single one of those devices have inside to be a computer?

A. A spinning hard drive, a full-size keyboard, and a large desktop monitor

B. A DVD drive, external speakers, and a wired mouse

C. A processor (CPU), RAM, and mass storage (along with an operating system)

D. Only a touchscreen and a battery, because phones and tablets do not need RAM or storage

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4. A student hears someone call the CPU the "brain" of the computer, but wants to know what it actually does when running games, websites, or spreadsheets. Based on the lesson, how does a CPU (Central Processing Unit) actually work?

A. It acts like a giant filing cabinet that stores all of your photos and saved documents when the power is off

B. It acts like a wireless antenna that connects your laptop to the nearest Wi-Fi router

C. It acts like a battery pack that supplies electricity to the keyboard and monitor

D. It acts like an incredibly powerful calculator that performs billions of calculations per second

5. In the "man in a box" analogy, light bulbs on the wall of the box turn *on* and *off* so the outside world can send messages to the CPU inside. How does a computer represent a light bulb being *on* versus *off* in binary?

A. **A** means the light is on, and **Z** means the light is off

B. **1** means the light is on, and **0** means the light is off

C. **100** means the light is on, and **50** means the light is off

D. **+ (plus)** means the light is on, and **= (equals)** means the light is off

6. Bonus Question

In the 1983 classic film *WarGames*, the massive military supercomputer WOPR blinks with hundreds of tiny lights while running millions of fast war-game simulations to figure out if anyone can win.

Based on your hardware lesson, which part inside WOPR acts like a super high-speed calculator that crunches all those numbers using 1s and 0s (binary)?

A. The mass storage drive, because spinning platters calculate math problems when the computer is turned off
B. The keyboard and monitor, because peripherals do all the math before sending answers to the computer
C. The CPU (Central Processing Unit), because it is the super-fast calculator that processes binary 1s (on) and 0s (off)
D. The power cord, because electricity turns binary numbers directly into saved Word documents