Memory and the CPU

*This first question is review. I ask you this info again as this is the format of the question that will appear on the exam.*

*Go to Memory Express and link into a FULL computer that you would be interested in buying. Then fill in the following table, including the units for all the measurements.*

| Link to the site: |
| --- |
| Size of hard drive: |
| Type of hard drive: (Regular HHD or SSD or both): |
| Size of Main Memory: |
| Brand of Processor: |
| Type of Operating System |
| Clock Speed: |

*Before continuing, check your above answers. Was your hard drive size in GB or TB? Was your memory in GB? Was your speed in GHZ?*

*Search the web to find the answers to the following:*

What is the brand/name of the processor used in the latest and greatest:

* MacBook:
* Microsoft Surface:
* Samsung Galaxy Smartphone:
* Iphone X:

*Check out the Memory Hierarchy Pyramid on the* [*Computer Memory Basics page*](https://computer.howstuffworks.com/computer-memory1.htm) *(from HowStuffWorks) and read the entire 1 page explanation.*

a) Paste the picture of the memory pyramid below.

b) In what section of the pyramid would a DVD Disk best fit? \_\_\_

c) In what section of the pyramid would a USB Stick best fit?\_\_\_

d) In what section of the pyramid would a SSD best fit?\_\_\_

e) Fill in the blanks from the site:

Whether it comes from permanent storage (the \_\_\_\_\_\_\_\_) or input (the keyboard), most data goes in \_\_\_\_\_\_\_\_ first. The CPU then stores pieces of data it will need to access, \_\_\_\_\_\_\_ in a \_\_\_\_\_, and maintains certain special instructions or individual pieces of data in the \_\_\_\_\_.

SDRAM, DDR1, DDR2 etc. are types of RAM chips.

1. What type do most modern PCs use today? (you may want to check out an advertisement on Memory Express)
2. What do the initials stand for?

The two cheapest ways to improve the performance of an average PC is to buy more RAM and to convert an HDD to an SSD

1. How much does it cost at Memory Express to buy 16GB of RAM (the type of RAM from the last question)
2. How much does it cost at Memory Express to buy a 500GB Solid State drive?

Recall that the BUS is the wiring or highway that the data flows on within the computer. The CHIP SET acts as the traffic cops of the bus. One chip in the set is called the Northbridge. The other is called the Southbridge.

1. Which controls the flow of data between the CPU and RAM?
2. Which controls the flow of data between the CPU and other parts of the computer?

What are the three main parts of the CPU according to our past notes?

Which of the 3 parts is most responsible for fetching the instruction and telling rest of the CPU what to do?

There are 2 types of REGISTERS based on what they hold. The two types are D\_\_\_\_ registers (starts with a D) and A\_\_\_ registers.