Lab 01 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Explain in detail what happens when a PC first starts up. Be sure to include the functions for the BIOS, CMOs, C: and RAM  
   Power goes from the outlet to the cord to the power supply in the computer. The power supply sends voltage to all the parts . The Bios, or mother board bios is the like the control center for the PC. The system bios makes sure all the key aspects of the computer, drives, keyboard, monitor, fans, video cards, pretty much everything is responding to its commands. The startup bios powers up the operating system. CMOS is the program build into the computer that allows you to change and configure the motherboard settings, one practical example would be to increase your cpu’s core speed, or overclocking. Ram is virtual memory that is used to store information that the CPU is processing, basically running applications. The program resides on a hard drive but when you want to run it the CPU has to open and process it, all of this occurs in the virtual memory of your ram. Ram is very important.
2. Why do we need both AC and DC current in the US?

Because AC is the best way to transport electricity throughout the country . Though, most applicances and devices that require electricity use DC. The electricity is converted using a rectifier and transformers are used to alternate the ratio of high voltage and less current to more current and less voltage, and hence more stable.

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Expansion slots are used to add extra ports for your computer to hook to other than the standard ones that comes on your mother boards. This could include additional sound or video out puts, as well additional USB ports or u could use an expansion slot to allow your newer computers to access older or other makes of hard drives that your mother board does not support otherwise.

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A transformer coverts the ratio of voltage and current so that it is easier safer and more economical to transfer all around the country. A rectifier converts the electricity from AC to DC, making it usable by devices and appliances. The one found in a computer is a Rectifier.

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The System BIOS manages essential devices, The Start up BIOS is used to start the computer and operating system, CMOS is used to configure motherboard preferences.

1. Page 43: Thinking Critically # 2

Please explain your calculations – I want more than a number

According to the definition of Watts on table 1-3, the measure of electrical power is calculated by multiplying Amps by volts. 5 \* 120 is 600.

1. Page 44: Real Problem 1-1

Use the Snipping tool to complete the table

|  |  |
| --- | --- |
| Item & price | Picture |
| **6-Foot ESD Strap W/Velcro Adjustable Strap**  6.99 | http://www.microcenter.com/product/209933/6-Foot\_ESD\_Strap\_W-Velcro\_Adjustable\_Strap |
| 58-Piece Precision Electronic Screwdriver Set -29.99 | http://www.microcenter.com/product/249318/58-Piece\_Precision\_Electronic\_Screwdriver\_Set |
| Electronics Cleaner -3.99 | http://www.microcenter.com/product/363673/Electronics\_Cleaner |
| 6" Needle-Nosed Pliers Slim Serrated Jaw -16.99 | <http://www.microcenter.com/product/206433/6_Needle-Nosed_Pliers_Slim_Serrated_Jaw> |
| Electrical Outlet / Receptable Tester 7.99 | http://www.microcenter.com/product/209814/Electrical\_Outlet\_-\_Receptable\_Tester |
| Composite LED Flashlight Black 3.99 | http://www.microcenter.com/product/381474/Composite\_LED\_Flashlight\_Black |

NOTE: you can ‘TAB’ to add more rows to the table.