Assignment 2

**2.1.5**

1. The CPU contains the control unit, arithmetical logical unit, the clock, and registers.

2. The CPU is connected to the computer through the Data bus, Address bus, and Control bus.

3. Since registers are temporary files that the computer is currently working on, they are on a surface  
 level easier to access for a computer. Memory is found outside the CPU so it takes time for to process  
 the user request thus it needs more machine cycles.

4. Fetch 🡪 Decode 🡪 Execute

5. Fetch operands & Store operands

**2.4.3**

5. The 8259A PIC controller is an interrupt controller that was designed to handle hardware interrupts   
 for the CPU with minimum time lost and can handle up to 8 interrupts at a time.

**2.5.2**

1. The application program is the most universal and portable since it has little requirements for it to  
 work and has less control of hardware.

3. The device driver provides a method of communication between the operating system (OS) and the  
 hardware. Without this driver printers, webcams, etc. would not be able to work with the OS.

4. The BIOS level exists.

5. The BIOS is integrated on the motherboard and will not change whether the computer is running  
 Windows or Linux.

**2.8**

7. The floating point unit (FPU) handles floating point arithmetic in the CPU.

8. There is 8 bits.

9. True

10. True

12. False

19. False

20. False

25. Any Level

26. So that its data can be processed as quickly as the hardware will let it.