

25 pts

Name: _____

Class Day / Time: _____

Due Date: _____

Lab #3 – x86 Processor Architecture

1. Suppose that you buy a PC with 32 MBytes of RAM. What is the 8-hex-digit address of the “last” byte?

2. Suppose that you discover that RAM addresses 000C0000 to 000C7FFF are reserved for a PC’s video adapter. How many bytes of memory is this?

3. Suppose that you have an Intel x86.

Find the five-hex-digit address that corresponds to each of these segment:offset pairs:

(a) 2B8C:8D21 _____

(b) 059A:7A04 _____

(c) 1234:5678 _____

4. In real-address mode, demonstrate to segment-offset address that point to the same linear address

5. The central processor unit is connected to the rest of the computer system using what three buses?

6. What are the three basic steps in the instruction execution cycle?

7. Name all eight 32-bit general-purpose registers in the x86 processor?

8. Name all six segment registers in the x86 processor?
