

Name:

Id#

COE 205, Term 052
Computer Organization & Assembly Programming
Quiz# 1

Date: Wednesday, Feb. 22, 2006

Q1. Explain the function of each of the following registers

- i. Instruction Pointer (IP).

- ii. Instruction Register (IR).

Q2. Suppose that the Instruction Pointer (IP) content is 0005 and that the instruction stored starting at that address is MOV AX, 5, which has a corresponding machine code B80005. Determine the content of the Instruction Pointer (IP) after fetching this instruction.

Q3. Give two advantages of programming in assembly language compared to high-level languages (e.g. Java).

Q4. Which of the following 8086 registers is part of the ISA: **Instruction Pointer (IP), Instruction Register (IR), Memory Address Register (MAR), Memory Data Register (MDR), AX, DL, SI, SP, BP, Y, Z.**

Q5. Determine the machine type and the size of the address bus and the data bus for the **8086** and the **Pentium IV** processors.

Q6. Determine whether the following operations are performed in the fetch or execute phase: **Reading an instruction from Memory, Reading and Writing Operands from/to Memory, Incrementing the Program Counter, Performing Arithmetic Operations e.g. subtraction.**

Q7. Order the following storage devices once in terms of **speed** and once in terms of **capacity**: RAM, Registers, Hard Disk, and Cache.