

Name: Key

Id#

COE 205, Term 042
Computer Organization & Assembly Programming

Quiz# 1

Date: Tuesday, Feb. 22, 2005

Q1. Fill the blank in each of the following questions:

- i. In the fetch phase, after reading an instruction from memory whose size is 16 bits, the instruction pointer register is increment by 2.
- ii. To read the content of variable I from memory that is stored at address 100, the value 100 is stored in the MAR register which is connected to the address bus.
- iii. The size of the **address bus** in the 8086 processor is 20 bits while in the Pentium IV Processor it is 36 bits.
- iv. The size of the **data bus** in the 8086 processor is 16 bits while in the Pentium IV Processor it is 64 bits.
- v. Reading operands from Memory is performed in the execution phase.

Q2. Indicate which of the following registers is part of the **instruction set architecture** of the 8086 processor:

(AL) (CX) (SI) (IP) IR, MDR, MAR, Y

Q3. State two advantages of programming a processor in assembly language.

1. One can write programs that are faster and of smaller code size
2. Full control of the machine resources