Name: **Id#**

COE 301/ICS 233, Term 172

Computer Architecture & Assembly Language
Quiz# 1

Date: Thursday, Feb. 1, 2017

Q1. Fill the blanks in the following questions:

(1) Two advantages of programming in assembly language are_____
_____.

(2) Two advantages of programming in high-level language are_____
_____.

(3) With a 24-bit address bus and 32-bit data bus, the maximum memory size (assuming byte addressable memory) that can be accessed by a processor is _____ and the maximum number of bytes that can be read or written in a single cycle is _____.

(4) The advantage of static RAM over dynamic RAM is that it is _____ but the disadvantage is _____.

(5) Accessing data from random access memory is slower than accessing it from _____ memory but faster than accessing it from _____memory.

(6) The bandwidth mismatch between the speed of processor and the speed of main-memory is alleviated by using _____.

(7) The _____ is considered as an interface between software and hardware and consists of _____, _____ and _____.

(8) Given a magnetic disk with the following properties:

- Time of one rotation is 8 ms
- Average seek = 8 ms, Sector = 512 bytes, Track = 200 sectors

The average time to access a block of 100 consecutive sectors is _____ ms.

Q2. Briefly describe the main functionality of the program counter register (PC), the instruction register (IR), and the fetch-execute process in a computer.