Name: Id#

COE 205, Term 101

Computer Organization & Assembly Programming

Quiz# 1

Date: Saturday, October 9, 2010

# 

# **Q1.** Fill the blank in each of the following:

# There is one-to-one correspondence between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Assembly language is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# One advantage of programming in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ language is that programs are portable.

# One advantage of programming in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ language is having smaller code size and faster execution time.

# It is more appropriate to use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ language for developing hardware device drivers.

# An \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a program that converts source-code programs written in assembly language into object files in machine language.

# The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a computer consists of the instruction set, programmer accessible registers and memory.

# With a 20 bit address bus, the physical address space is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# The advantage of DRAM over SRAM is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ while the disadvantage is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Cache memory is used to help bridge the gap between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Part of the disk access time, seek time is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ while rotational latency is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# The unsigned binary number 10100101 represents the decimal value \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# The unsigned decimal number 500 is represented in binary as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Assuming 8-bit representation, the signed number -30 is represented in sign-magnitude as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and in 1’s complement as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and in 2’s complement as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Assuming 2’s complement representation, the 12-bit number FD0 represents the decimal value \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and is represented using 16-bits as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

# Assuming 2’s complement representation, the operation FFE1 – 7FE0 produces the result \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and overflow = \_\_\_\_\_\_\_\_\_\_\_.

# Assuming 8-bit 2’s complement representation, the smallest number that can be represented is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in decimal and \_\_\_\_\_\_\_\_\_\_\_\_\_ in binary.

# Assuming that an 8-bit register contains the hexadecimal value C5 representing a character, the character stored is \_\_\_\_\_\_\_\_ and the parity used is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Note that the ASCII code of character ‘A’ is 41h.