

Name:

Id#

**COE 202, Term 162**  
**Fundamentals of Computer Engineering**

**Quiz# 1**

Date: Thursday, Feb. 16

**Q1.** Determine the decimal value of the following numbers:

i.  $(10010011.101)_2$

ii.  $(21.4)_{16}$

**Q2.** Represent the following numbers in **binary** and **hexadecimal**. Use as many bits as needed, and approximate the fraction to **4 binary digits**:

i.  $(240.8)_{10}$

ii.  $(170.7)_8$

**Q3.** Perform the following arithmetic operations:

i.  $(11101110)_2 + (10110111)_2$

ii.  $(D3)_{16} - (AF)_{16}$

**Q4.** Determine, in binary, hexadecimal and decimal, the *largest* number that can be stored in an 8-bit register.

**Q5.** Assuming that an 8-bit register contains the hexadecimal value C5 representing a character, determine the character stored and type of parity used (i.e. even or odd parity). Note that the ASCII code of character 'A' is 41h and the ASCII code of character 'a' is 61h.