

Name:

Id#

ICS 233, Term 063

Computer Architecture & Assembly Language

Quiz# 3

Date: Monday, August 6, 2007

- Q.1.** Using the refined **signed multiplication** hardware, show the signed multiplication of: **Multiplicand=1101** by **Multiplier=1101**. The result of the multiplication should be an 8 bit signed number in HI and LO registers. Show the steps of your work by filling the table given below.

Iteration	Multiplicand	Sign	Product = HI, LO
0			
1			
2			
3			
4			

- Q.2.** Using the refined **unsigned division** hardware, show the unsigned division of: **Dividend=1111** by **Divisor=0110**. The result of division should be stored in the Remainder and Quotient registers. Show the steps of your work by filling the table given below.

Iteration	Remainder	Quotient	Divisor	Difference
0				
1				
2				
3				
4				

Q.3. Show the IEEE 754 binary representation for: **-13.53125** in **single precision**.

Q.4. Perform the following floating-point operation rounding the result to the nearest even., using guard, round and sticky bits.

```
  0100 0010 0000 0000 0000 0000 0000 0000
-  0011 1111 1000 0000 0000 0000 0001 0001
```