Name: Id#

COE 301/ICS 233, Term 161

Computer Architecture & Assembly Language

Quiz# 2

Date: Tuesday, Nov. 8, 2016

## **Q1.** Given that **Multiplicand=1010** and **Multiplier=1011,** using **signed multiplication** hardware, show the **signed** multiplication of **Multiplicand** by **Multiplier**. The result of the multiplication should be an 8 bit **signed** number in HI and LO registers. Show the steps of your work.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Iteration** | | **Multiplicand** | **Sign** | **Product = HI,LO** |
| 0 | Initialize |  |  |  |
| 1 |  |  |  |  |
|  |  |  |  |
| 2 |  |  |  |  |
|  |  |  |  |
| 3 |  |  |  |  |
|  |  |  |  |
| 4 |  |  |  |  |
|  |  |  |  |

## **Q2.** Given that **Dividend=1011** and **Divisor=0010**, Using the **unsigned division** hardware, show the **unsigned** division of **Dividend** by **Divisor**. The result of division should be stored in the Remainder and Quotient registers. Show the steps of your work.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Iteration** | | **Remainder (HI)** | **Quotient (LO)** | **Divisor** | **Difference** |
| 0 | Initialize |  |  |  |  |
| 1 |  |  |  |  |  |
|  |  |  |  |  |
| 2 |  |  |  |  |  |
|  |  |  |  |  |
| 3 |  |  |  |  |  |
|  |  |  |  |  |
| 4 |  |  |  |  |  |
|  |  |  |  |  |