CSCIU 210 – Computer Organization

Homework-4, Weight: 30 points

Due on Wednesday, October 17, 2018 at the beginning of the lecture (Hard Copy)

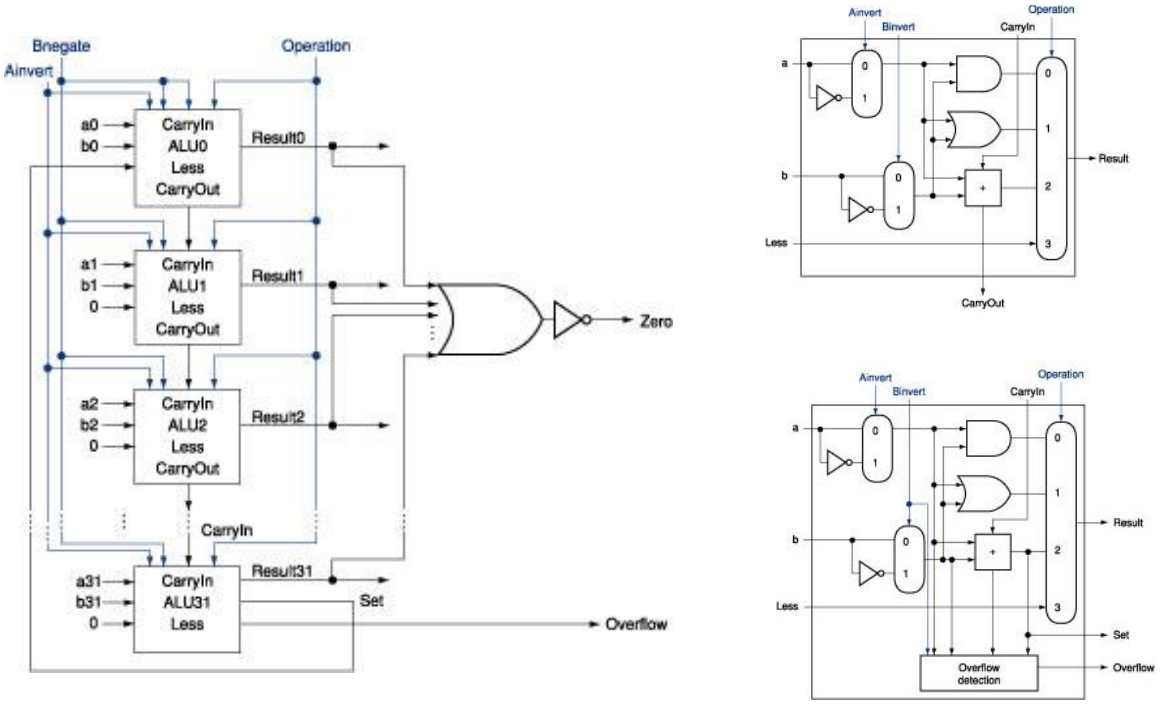
Note: You need to include your calculation details to receive full credit!

Q1. [10 points] Draw the block symbol for a 8:1 MUX with two enables. Label the inputs as I0, I1,I2….I7; select lines as S0,S1,S2 and the output as F. The enables are E1 and E2, where E1 is active high and E2 is active low.

Q2. [10 points] Draw the block symbol of a 2:4 decoder. Write the truth table for it, and draw the gate level circuit.

Q3. [10 points] An ALU diagram we covered in class is shown below:

The ALU line control code is [Ainvert (1 bit), Binvert (1 bit), Operation (2 bit)]. Answer the following questions:



a) [5pts] Give ALU line code for NAND (not-AND) function

a) [5pts] Give ALU line code for SLT (set on less than) function