

**ELE 455/555**

Spring 2015

# Homework 4A

Due 2/25

Beginning of class

1A. Review the concept and implementation of a Carry-Look-Ahead adder. In your own words describe the role of the Generate function and the Propagate function and explain why they work. 10pts

2A. Create a truth table and simple logic schematic to map **ALUop** and **funct** to **ALU CNTL** signals for all the **OPCODE = 0/** MIPS instructions.  
(ADD – SUBU on the left side of the MIPS Reference sheet in the book) **10pts**

3A. After completion of the instruction “lw \$t1,8(\$s2)” indicate the value of each data bus. Assume \$t1=0x3214, \$s2=0x1124, and the instruction was located at memory location 0x1AB0, use x for unknown - 10pts

