

# CMPUT 229 - Computer Organization And Architecture I

## Quiz #1 — Winter 2014

Jacqueline Smith  
Computing Science Department - University of Alberta

Name: Solution

### CMPUT 229 Honor Code

By turning in the quiz solution for grading, I certify that I have produced the solution in accordance to the academic integrity policies in Section 26.1 of the University of Alberta 2013/2014 Calendar.

#### Question 1 (5 points):

Assume that register \$s0 contains 0x0000000F.

What is the value of register \$t0 in hex after the following instructions?

andi \$t0, \$s0 0x0007 → \$t0 = 0x0000 0007  
sll \$t0, \$t0, 2 → \$t0 = 0x0000 001C

#### Question 2 (5 points):

Using the tables on the back page of this quiz, give the hexadecimal representation of the following instruction:

sub \$t1, \$t0, \$t1

R-type

\$t0 → 8 → 01000

\$t1 → 9 → 01001

0	1	0	9	4	8	2	2
000000	01000	01001	01001	00000	10001		
opcode(6)	rs(5)	rt(5)	rd(5)	shamt(5)	func(6)		

0x 0109 4822