

CMPUT 229 - Computer Organization And Architecture I

Quiz #1 — Winter 2014

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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?

sll \$t0, \$s0, 2 → \$t0 = 0x0000 003C
andi \$t0, \$t0, 0x000F → \$t0 = 0x0000 000C

Question 2 (5 points):

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

add rd \$t0, ^{rs} \$t0, ^{rt} \$t1

R-type ⇒

0	1	0	9	4	0	2	0
000000	01000	01001	01000	00000	100000		
opcode(6)	rs(5)	rt(5)	rd(5)	shamt(5)	func(6)		

\$t0 → 8 → 01000

\$t1 → 9 → 01001

0x0109 4020