# Part J: Assembly Language, part 1  (12 marks)

In the spaces provided below, write the assembly language instruction(s) that perform the following tasks. Full marks will only be given for one-instruction answers. Do not use pseudo-instructions in your solutions.

**a)** Set register $t0 to 0 if register $s0 is even, and 1 if $s0 is odd. **(3 marks)**

addi    $t0 , $s0  , 1

**b)** Invert all the bits of $a0. **(3 marks)**

nor   $a0, $a0 , $zero

**c)** Jump to address 0x00000000 in memory. **(3 marks)**

j    0x00000000 0

**d)** Set $t0 to half the value of $t1. **(3 marks)**

srl    $t0 , $t1 , 1