Assignment - 1

Name : Wasimul Karim

ID : 011 211 105

Course : CSE - 3313

Section : A

Ans to the Q. No-1

(a) NOT doesn't exist because, $A = \sim B$ can be done using

$$A = B \text{ NOR } 0$$

We can just use zero register instead of 0,

∴ nor $s0, $s1, $zero (Here A = $s0, B = $s1)

∴ We can perform "NOT" operation using "nor" ~~NOR~~. That's why "not" doesn't exist in MIPS.

(b) Suppose we have an equation,

$$a = \overline{b+1}$$

we can write,

$$t = 1$$
$$\Rightarrow t = 0 + 1$$

∴ ori $t0, $zero, 1

after that,

nor $s0, $s1, $t0 (where a = $s0, b = $s1)

So, we can say, we don't need "nori" because we have alternative way by using "ori" and "nor" in MIPS.

Ans to the Q. No-2

```
addi $s0, $zero, 5
addi $s1, $zero, 10
jal ADDF
add $s2, $V0, $zero
add $s2, $s2, $s0
add $s2, $s2, $s1

ADDF:
  addi $sp, $sp, -4
  sw $s0, 0($sp)
  add $s0, $a0, $a1
  add $v0, $s0, $zero
  lw $s0, 0($sp)
  addi $sp, $sp, 4
  jr $ra
```