



Quiz 1 (Spring 2022) - Solution

Course Name: Computer Organization

Time: 20 mins

Instructor: Dr. Ayaz ul Hassan Khan

Name: _____ Identification #: _____

Date: _____ Total Marks: 10 Marks Obtained: _____

Signature of Instructor: _____

Q#1: Write the MIPS assembly language instruction for the following machine code:

0x02581021

[5 marks]

```
000000 10010 11000 00010 00000 100001
```

```
0x0    18    24    2     0    0x21
```

```
addu $v0, $s2, $t8
```

Q#2: Complete the symbol table for the following data definitions showing the address of each label, given the starting address is **0x10010000** in the data segment. [5 marks]

.DATA

var1: .BYTE 1, 2, -3, -4, 5, 6, 7

var2: .WORD 0x12345678

str1: .ASCIIZ "Test String\n"

.ALIGN 3

var3: .HALF 1000

var4: .DOUBLE 1.5e-10

Label	Address
var1	0x10010000
var2	0x10010008
str1	0x1001000C
var3	0x10010020
var4	0x10010028