

Student Name: SOLUTION

Roll No: _____

Program: BCS
Semester: Fall-2022
Time Allowed: 20 Minutes
Course: COAL

Total Marks: 6 Weightage: 4
Date: 20th October, 2022

Quiz 02

Sort the given "data" using following assembly language program. Mention the total number of iterations as per given program. Also mention total number of iterations required to completely sort the data.

```
[org 0x0100]
mov cx, 3

outerloop:
mov bx, 0

innerloop:
mov ax, [data+bx]
cmp ax, [data+bx+2]

jna donothing
mov dx, [data+bx+2]
mov [data+bx+2], ax
mov [data+bx], dx
mov byte [swap], 1

donothing:
add bx, 2
cmp bx, 6
jne innerloop
cmp byte [swap], 0

je exit
loop outerloop

exit:
mov ax, 0x4c00
int 0x21
```

Total number of iterations as
per given program = 3

Iterations required in actual = 1

data: dw 1, 5, 4, 6, 7
swap: db 0