

## COE 205 Term 002

Quiz # 2Student Name: **KEY SOLUTION**

ID:

Section:

**Question 1:**

Assuming the following fragment of code:

**.Stack 100H**

```

                MOV AX, 0200H
                MOV CX, 200
                PUSH AX
AGAIN:         PUSH CX
                MOV CX, 0010H
NEXT:         NOP
                ROR AX, 1
                LOOP NEXT
                POP CX
                LOOP AGAIN

```

A - How many times is the inner loop going to be executed?

**Answer:***Number of Times =  $200_{10} \times 10_H = 200 \times 16 = 3200$* 

B – What would be the final value in the AX register?

**Answer:***The inner loop will rotate AX 16 times, hence its value remains unchanged.  
No matter how many times we repeat this process AX will remain unchanged.*

C - After the loop ends, what would be the value of SP compared to the initial value?

**Answer:***Final Values of SP = SP (initial) - 2 = 100H - 2 = FEH***Question 2:**The following program is supposed to call the procedure **PROC1** N times.

<pre> MOV CX, N NEXT: CALL PROC1 LOOP NEXT </pre>	<p>Where PROC1 is defined as follows:</p> <pre> PROC1 PROCEDURE NEAR                 MOV CX, M Again:  ...                 LOOP Again                 ...                 RET PROC1 ENDP </pre>
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A - How many times is the call to the procedure PROC1 going to be executed?

**Answer:***Infinity**(3 marks)*

B- In case of error can you correct it.

**Answer:**

```

MOV CX, N
PUSH CX
NEXT: CALL PROC1
POP CX
LOOP NEXT

```

