

Name:

Id#

COE 205, Term 061
Computer Organization & Assembly Programming

Quiz# 5

Date: Sunday, Jan. 7, 2006

Q1. Given the following macros shown below, determine the **macro expansion**, i.e. the assembly code that will be generated, for the macro invocation **ADDA MyArray, EAX, 10**.

```
Save_Regs    MACRO reg
              IRP R, <reg>
              PUSH R
              ENDM
            ENDM
Restore_Regs  MACRO reg
              IRP R, <reg>
              POP R
              ENDM
            ENDM
ADDA         MACRO X, Y, Z
              Local Next
              Save_Regs <ESI, ECX>
              XOR ESI, ESI
              MOV Y, 0
              MOV ECX, Z
              Next:
              ADD Y, X[ESI*4]
              INC ESI
              LOOP Next
              Restore_Regs <ECX, ESI>
            ENDM
```