EE213 Computer Organization and Assembly Language

Quiz I – Fall 2019

September 18, 2019

**Paper-B**

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Section\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Assuming the following data segment starts at **0000 1F07h**, answer the following questions: [**6 Points**]

.data

val32 LABEL DWORD

var1 WORD 0F001h, 2 DUP (0F00Fh, 0F0Dh)

var3 DWORD $

.code

MOV EAX, PTR DWORD [val32+2]

INC AL

MOV EDX, EAX

XCHG AL, AH

XCHG DX, WORD PTR [var3 + 2]

1. What does **EAX**, and **EDX** contain after the above code gets executed?
2. Draw out the **var3**’s memory look up (byte by byte) after above code gets executed.
3. Fill in the blanks: [**2 Points**]
4. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ operator counts the number of elements in an array.
5. The EDS register is used to store the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ flag is set when an arithmetic or logical operation generates a negative result.
7. What special purpose does the ECX register serve?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Complete the given diagram. [**4 Points**]

