EE213 Computer Organization and Assembly Language

Quiz I \_Section A\_Fall 2019

September 18, 2019

**Paper-B**

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

1. Assuming the following data segment starts at **9001 9001**h, answer the following questions:

.data

val16 LABEL WORD

var1 SBYTE 09h,90h

var2 WORD 0FCDCh, 2 DUP (01221h, 06765h)

var3 DWORD $

.code

MOV EAX, PTR DWORD [val16+4]

MOV EBX, OFFSET [var2+2]

ADD WORD PTR [EBX], 2

MOV EDX, EAX

XCHG DH, DL

SUB EBX, 4

XCHG AX, WORD PTR [EBX]

1. What does **EAX**, and **EDX** contain after the above code gets executed? [**02 Points**]
2. Draw out whole the **data segment** (byte by byte) after above code gets executed. [**06 Points**]
3. Briefly elaborate the purpose of each of the following components with example. [**04 Points**]

**1.** SIZEOF operator **2.** Carry Flag (CF) **3.** OFFSET Operator **4.** ESS Register