EE213 Computer Organization and Assembly Language

Quiz I \_**Section H**\_Fall 2019

September 18, 2019

**Paper-B**

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

1. Given the code snippet below, assuming the given data segment starts at **1912 FFC1**h, answer the following questions. [**06 Points**]

.data

var1 BYTE 2 DUP(12h,01h,11h),0

var2 WORD 2 DUP (360Fh,1301h,141h)

var3 DWORD 0FCC21h, $

.code

MOV ESI, OFFSET [var1 + 0Ch]

MOV EAX, DWORD PTR [ESI]

MOV EBX, DWORD PTR [var3+4]

ADD WORD PTR [EBX], 2

MOV EDX, EAX

XCHG DH, DL

SUB ESI, 4

XCHG AX, WORD PTR [ESI]

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.**  Instruction Queue **2.** Parity Flag (PF) **3.** MOVSX Instruction **4.** ESS Register