Assignment 4

**4.2.8**

1. inc val2

2. sub eax,val3

3. mov ax,val4  
 sub val2,ax

4. add val2,1 ; val2 = 8001 h

5. OF = 1 and SF =1

6. Missing values have been bolded:  
mov ax,7FF0h  
add al,10h ; **a. CF = 1, AF = 0, ZF = 1, OF = 0**add ah1,1 ; **b. CF = 0, SF = 1, ZF = 0, OF = 1**  
add ax2,2 ; **c. CF = 0, SF = 1, ZF = 0, OF = 0**

**4.3.8**

1. False, the number of bits returned is based on the declaration of the operand and will then be  
 assessed by the OFFSET operator.

2. False, the number of bits returned is dependent on the used size needed to access the needed part of  
 a value.

3. True, the TYPE operator returns a value of 4 for doubleword operands.

4. False, the LENGTHOF operator returns the number of elements in an operand not the number of  
 bytes in it.

5. True, the SIZEOF operand returns the number of bytes in the operand.

**4.4.5**

4. True, array[esi] is an indexed operand. This is because esi would have been given another address before executing and the ESI was also given its value by the index operator, [ ].

5.   
a. AL = 10h  
b. AL = 40h  
  
c. AX = 003Bh  
  
d. EDX = 3  
e. EDX = 3  
  
f. EAX = 2

**4.10**

TITLE Copy a String (CopyStr.asm)

INCLUDE Irvine32.inc

.data

source BYTE "This is the source string",0

target BYTE SIZEOF source DUP('#')

.code

main PROC

mov esi, SIZEOF source

mov ecx, SIZEOF target

mov edx, 0

MYLOOP:

mov al,[source + esi - 1]

mov [target + edx], al

dec esi

inc edx

loop MYLOOP

call ExitProcess

main ENDP

end main