Computer Organization and Assembly Language

Lab 4	
Topic	1. Mov instruction 2. Add,sub 3. Memory Addressing modes 4. Flag register

PART 2

Q1: Write a program to add ten numbers using Indirect addressing mode (register + offset), take address of ***fifth*** variable. Save the sum in a word size variable.

Consider numbers are signed becareful when adding word and byte.

Let

Num1: db 17

Num2: db -50

Num3: dw 0xFACD

Num4: db 250

Num5: dw -100

Num6: db 254

Num7: dw 3400

Num8: dw 0xA2AB

Num9: db 65h

Num10: dw 0x453

SUM: dw 0

Q2: Write a program to add ten numbers using Direct addressing mode, take address of ***fourth*** variable. Save the sum in a word size variable.

Consider numbers are signed becareful when adding word and byte.

Let

Num1: db 17

Num2: db -50

Num3: dw 0xFACD

Num4: db 250

Num5: dw -100

Num6: db 254

Num7: dw 3400

Num8: dw 0xA2AB

Num9: db 65h

Num10: dw 0x453

SUM: dw 0

Q3:Write short programs such that sets the value of respective flags. You can use variables, registers with add or sub instructions to get these values of register. NOTE: if multiple flags are '1' then they should be set to'1' at same instruction not one by one.

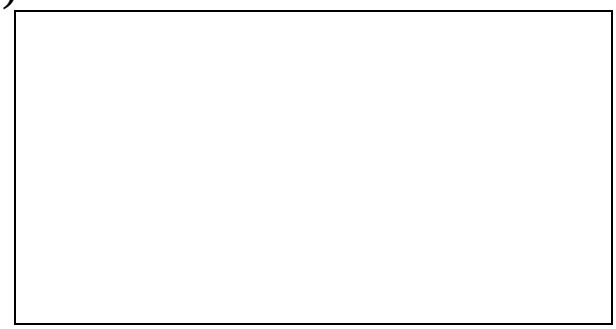
a)

CF	**1**
SF	**0**
ZF	**0**
OF	**0**
AF	**0**
PF	**0**

b)

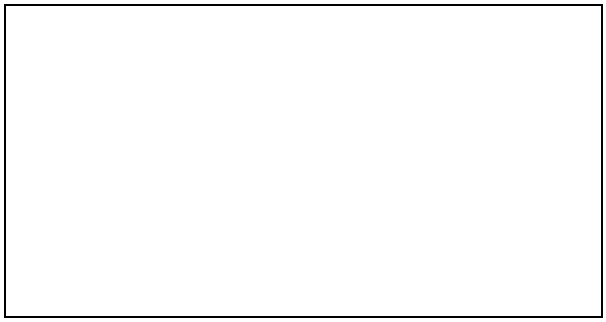
CF	**1**
SF	**0**
ZF	**1**
OF	**0**
AF	**0**
PF	**0**

c)



CF	**1**
SF	**1**
ZF	**0**
OF	**1**
AF	**0**
PF	**0**

d)



CF	**1**
SF	**1**
ZF	**0**
OF	**0**
AF	**0**
PF	**0**