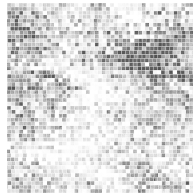


# SERIE 1 – ALU OPERATIONS

Information systems



## Question 1

Let's consider that the following code has been executed and that the flags were all 0 before the code.

```
1  movlw 2f
2  addlw 55
```

(a) What is the content of WREG (in binary)?

(a) \_\_\_\_\_

(b) What are the values of the C, DC and Z status flags?

(b) \_\_\_\_\_

(c) Is the information that the flags were equal to 0 before this code has been executed useful? Justify your answer!

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## Question 2 – Changing status bits

The content of address 0xE is 0xAA and WREG contains the value 0x55. What are the modified status flags (and their values) for the following instructions (instructions are independent)?

(a) movlw 0x00

(a) \_\_\_\_\_

(b) clrf 0x47

(b) \_\_\_\_\_

(c) xorwf e, 1

(c) \_\_\_\_\_

(d) rlcwf e, 0

(d) \_\_\_\_\_

(e) andlw 0x00

(e) \_\_\_\_\_

(f) addlw 0xab

(f) \_\_\_\_\_

**Question 3 – *The usage of STATUS***

We want to check in assembly if the content of the variable at the address 0x10 is smaller than 3 or not. If it is, you have to put a 1 in bit 0 of address 0x1.

(a) Explain the principle of your code:

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.....  
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(b) Write the required code