

Exercise 1 : (justify each answer)

1- Let  $A = 76_{(10)}$  and  $B = -83_{(10)}$ .

a. Represent A and B in C2 on 8 bits

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a. Compute  $(-A - B)$  in C2 on 8 bits. Indicate the overflow, carry, and check the result in decimal.

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2- Let  $A = 100100_{(c2)}$  and  $B = (10010100)_{(sm/sva)}$ . Compute  $(A+B)$  in C2 on 8bits. Indicate the overflow, carry, and check the result in decimal.

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3- Let  $A = -110.0110_{(2)}$  and  $B = 0010\ 0110.0110\ 0010\ 0101_{(BCD)}$ .

a. Represent A and B in the IEEE 754 standard.

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a. Compute  $(A + B)$  in the IEEE 754 standard.

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- 4- Let  $A = 1001\ 0101_{(BCD)}$ ,  $B = 10100010_{(Gray)}$ .  $C = B + 2$
- Give the value of C without conversion to base 2.
  - Compute  $(A + B)$  in BCD.

- 5- Sachant que 'A' =  $41_{(16)}$ , 'a' =  $61_{(16)}$ , '0' =  $30_{(16)}$  et espace =  $20_{(16)}$ .

Donner la codification en ASCII de **votre** date de naissance exemple : « 01 Janvier 2000 ».

Codification : .....