Notes:

1. You should include all the main steps that you followed to find the answer.

2. This assignment is due by *Thursday (24/10/2024) before 11:59 pm.* Assignment should be submitted to ritaj to the message called "Assignment one submission". يجب تسليم الواجب من خلال الرد على هذه الرسالة على رتاج.

3. The assignment should be submitted by the due date and time. *(Late Assignments will not be accepted for any reason)*

4. The assignments are *individual* effort and copying the assignment from any source will be treated as a cheating attempt, which may lead to *FAILING* the course.

5. Your answers should be clear and readable. The assignment should be TYPED (Handwritten assignments are not accepted) submitted by the due date and time to Ritaj to the message Above.

Question 1: Using 8-bit pattern and two's complement, find the answers (Show the solution steps)**.**

   a. $(34)_8$ - $(56)_6$ = ($)_2$ = ($)_{10}$

   b. $(4C)_{16}$ - $(431)_5$ = ($)_2$ = ($)_{10}$

Question 2: Use the 32-bit floating point representation to represent the following numbers in memory (up to ten digits after binary point): show your steps

   a. $(-26.125)_{10}$ =

   b. $(101.2)_{10}$ =

Question 3: The value below represents a float value in the computer memory using 32-bit floating point representation. Find out the decimal value for this representation. (Show the solution steps).

00
A0
50
C3

Question 4:

   a. Represent the following *two integers (2 bytes each using 2's complement)* in computer memory: 68, -128

   b. Represent the following characters in memory (8-bit ASCII chars) using odd parity : (Pal_S)