Assignment 1

Deadline: Thursday March 25,-2021

* No Assignment will be accepted after the deadline.
* You need to submit the assignment in Hard-form (your own hand-written on paper) over the slate.
* CALCULATOR IS NOT ALLOWED
* Best of Luck.

Question # 1: Complete the table. (4 bits: -8,4,2,1)

|  |  |  |  |
| --- | --- | --- | --- |
| Decimal | Signed Magnitude Form | 1’s Complment | 2’s Compment |
| 7 |  |  |  |
| 6 |  |  |  |
| 5 |  |  |  |
| 4 |  |  |  |
| 3 |  |  |  |
| 2 |  |  |  |
| 1 |  |  |  |
| 0 | 0000 | 0000 | 0000 |
| -0 |  |  | NA |
| -1 |  |  | 1111 |
| -2 |  |  |  |
| -3 |  |  |  |
| -4 |  |  |  |
| -5 |  |  |  |
| -6 |  |  |  |
| -7 |  |  |  |
| -8 | NA | NA | 1000 |

Question # 2: Convert 110111101.1011 binary number to decimal using sum of weight and repeated division/multiplication method.

Question # 3: Convert 86235.876 decimal numbers to binary using sum of weight and repeated division/multiplication method.

Question # 4: Convert the decimal number -412.390625 to a single-precision floating-point in IEEE-754 standard binary number.

Question # 5: Determine the binary value of the following floating-point binary number:

11011011011000101100111010110111