**National University of Computer & Emerging Sciences, Karachi** **Spring 2021**Assignment I

**Instructions:**

* Read the following scenario carefully before performing the given tasks
* You can use Google if you need to (although it's likely that you won't have to)
* Don't share your solutions with each other
* Use comments to explain your code wherever applicable

**Submission:**

* You'll need to submit a single .***docx*** file containing separate solutions for each task
* Before submission, rename your file as your ID e.g. ***k20-1234.docx***
* **Deadline:** *Monday, 20th of March, 2021 (07:00 am)*
* To be submitted on Google Classroom *(code:* cj6dvs2*)*

Q1. Express -65 in 1’s and 2’s complement form.

Q2. Convert the signed binary number 10001001111 in single-precision floating point format (Note: self-reading is required before solving it.)

Q3. Add the given BCD numbers: (10010111)+(01000011).

Q4. Add : (101)2 + (101)2

Q5. Solve: i) (101)2 \* (101)2

ii) (101)2 ÷ (101)2

Q6. Design a circuit which provide an output 1 when all the input are same.