Assignment 1   **Full Marks: 20**
Submission Deadlines:
9:30AM, 17th September 2020 for 100% weightage
9:40AM, 17th September 2020 for 80% weightage
9:50AM, 17th September 2020 for 60% weightage

Instructions:
1. Each question carries 5 marks.
2. You need to write your answers in your copy and submit the scan copy in Moodle. It is time based submission. So, people who submit early will get extra credit.
3. In each page of your submission, writing your name and roll number is must on top of the page (preferably in different color). A page without your name or roll number will not be evaluated.
4. Scan all pages and create a single file for submission with your roll number as file name. Be very specific in your answer. The less number of pages, the less size file you have to upload.

Questions:
1. Convert the following number in the way specified:
   $(3125.345)_8$ to base 5

2. $X = A+B$ is in 8-bit number system
   A is given as 11001010 in 2's complement binary system, B is given as 10110100 in signed number system, what is the value of X in 2's complement number system.

3. Verify that the data message given below is correct or not. If it contains error, then identify that error and find the correct message. (data message is encoded using hamming code encoding method)
   $H = 011100101110$

4. Find the maximum number possible of the following expression by inserting the brackets in the expression.
   Example: $t = (p - q) * r$

   $X = 10 - 1100 - 01 * 111100$
   Find max value of x.