Dt: 08st June 2021

# Assignments (Lab 8)

**NB:** This paragraph is common for all the questions. The programs should work for any value of N (as high it may be). What is the complexity of the algorithms? Please state the reason with a proper explanation [Write on a white paper and submit the scan copy with the assignment PDF file]. Each program should be run for at least TWO test cases. If you are assigning any memory through malloc() function, remember to free() up that memory at the end of the program.

1. Create an integer Binary Tree (height>=3) of your choice using Linked List. Fill the integers randomly. After creation of the Tree, Write the recursive functions for Pre-Order, In-Order and Post-Order traversals. While traversing, find the Mean and Standard Deviation of the elements in the tree.

2. Create a Complete Binary Tree made up of all the alphabets (A to Z) using Linked List. A is the root of the tree. B and C will be the left and right children of A, respectively, and so on. Write the recursive functions for Pre-Order, In-Order and Post-Order traversals to print the elements in the Tree.