

**Institute of Engineering Science and Technology, Shibpur.
IT Department , Session 2018 July-Dec**

DATA STRUCTURE LABORATORY 2018

ASSIGNMENT -3

BATCH HY

DUE DATE : 06.08.2018

1. Write a method `duplicateStack` that returns a new stack containing the same elements and in the same order as the stack specified in the parameter. The method should create a new stack and fill it with the same data elements as the given stack. (You do not need to duplicate the contents of the elements.). Before the method finishes, it must restore the contents of the original stack to its original state (same contents in the same order).
2. a) Write a program to convert an infix expression of integers into its equivalent postfix notation-using stack.

b) Write a program to evaluate a postfix and prefix expression.
3. Write a program to implement three stacks ADT using one array.
4. Sort the given set of elements present in three stack data structures and put them in a single stack, without using any other variable.