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

**DATA STRUCTURE LABORATORY 2018**

**ASSIGNMENT - 4**

**BATCH HY DUE DATE : 09.08.2018**

1. Write a C Program to implement Circular-Queue in an array.

2. Write a program to implement a queue using two stacks data structure.

3. Write a program to implement priority scheduling scheme using a circular

queue. In priority scheduling, higher priority elements selected first.

4. Suppose we have two queues, P and Q, and one stack S. We are only

allowed to dequeue from P and allowed to enqueue into the Q. We can do push and pop from the stack. In this assignment, you will be given a permutation of n numbers and asked to check if it is a stack permutation or not.

[Stack permutation: A stack permutation is an ordering of numbers from 1 to n that can be obtained from the initial ordering 1, 2, ... n by a sequence of stack operations as described above.]