Seat No.	

SE - 193

Total No. of Pages : 2

S.E. (Computer Science and Engineering) (Semester - III) (Revised) Examination, November - 2018

DATA STRUCTURES

Sub. Code : 63526

Day and Date : Tuesday, 27 - 11 - 2018 **Total Marks : 50**

Time : 09.30 a.m. to 11.30 a.m.

Instructions :
1) **All questions are compulsory.**
2) **Figures to the right indicate full marks.**
3) **Assume suitable data whenever necessary.**

Q1) a) With help of suitable example, explain following conditions in Stack [7]

i) Stack Overflow

ii) Stack Underflow

iii) Traverse in Stack

OR

Explain with help of suitable example working of Priority Queue.

b) Explain following terms with help of suitable example : [6]

i) Pointer

ii) Structure

iii) Control Structure

Q2) a) Explain algorithm for Merge Sort. [4]

b) With help of suitable example, explain working of Linear Search. [4]

c) What is Hashing? Explain different types of Hash Functions. [4]

Q3) a) Construct algorithm for following operations on a Singly Linked List [7]

i) Create at Start

ii) Delete at End

iii) Traverse

P.T.O

OR

What is Circular Linked List? List various operations of Circular Linked List and explain any one operation.

b) Explain following graph storage mechanism. [6]

i) Adjacency Matrix

ii) Adjacency Lists

Q4) a) Write algorithm for creating a node at given location in a Doubly Linked List. [4]

b) What is Heap? Explain how heap can be used to sort the elements of array. [4]

c) Explain following types of Trees : [4]

i) Binary Tree

ii) Strictly Binary Tree

iii) Complete Binary Tree

iv) B- Tree

SUK-24707