SV - 193

Seat No.	

Total No. of Pages : 2

S.E. (Computer Science and Engineering) (Semester - III)
(Revised) Examination, May - 2019
DATA STRUCTURES
Sub. Code : 63526

Day and Date : Thursday, 16 - 05 - 2019 **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 working of PUSH and POP operations of Stack. **[7]**

OR

Explain applications of stack. Write an algorithm for converting infix to prefix notation using stack.

b) Explain following terms with help of suitable example. **[6]**
   a) Function.
   b) Time and Space Complexity.
   c) Data Types.

Q2) a) With help of suitable example, explain working of Bubble Sort. **[4]**

b) Choose appropriate search technique and solve search of given key elements **[4]**
12, 24, 26, 28, 35, 42, 44, 60, 70
Key : 24 Key : 42 Key : 100 Key : 35

c) What is Queue? Explain drawback of simple Queue. **[4]**

Q3) a) Construct algorithm for following operations on a Circular Linked List. **[7]**
   i) Create at Start
   ii) Delete at End
   iii) Traverse

OR

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

b) Explain basic graph terminologies with help of suitable examples. **[6]**

P.T.O.

Q4) a) Write algorithm for counting the number of elements in a given singly linked list. **[4]**

b) What is B-Tree? Explain with help of suitable example, creation of B-Tree? **[4]**

c) Define Tree. Explain basic tree terminologies. **[4]**