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**SAINTGITS COLLEGE OF APPLIED SCIENCES**

**INTERNAL ASSESSMENT EXAMINATION, SEPTEMBER 2019**

**Department of computer applications , Semester 3**

DATASTRUCTURE USING C++

Total : **80 marks** Time: **3Hours**

**Section A**

*Answer any 10 questions. Each question carries 2 marks.*

1) What is FIFO and LIFO?

2) Define recursion.

3) Define Data structures.

4) What is doubly linked list?

5) What is Complete binary trees?

6) What you mean by file organization?

7) Define circular queue.

8) What is an algorithm?

9) Define Binary tree?

10) Define Sparse matrix.

11) What is garbage collection?

12) List different sorting techniques.

(10x2=20)

**Section B**

Answer any six of the following. Each question carries 5 marks.

13) What are different applications of stacks?

14) Differentiate sparse and dense matrix.

15) Explain different types of linkedlists.

16) What are different file operations.

17) Write advantages and disadvantages of doubly linkedlist.

18) Explain different types of queues.

19) Define root,node,terminal node,degree.

20) Convert the infix expressionA+B\*C/D into postfix.

21) Differentiate linear binary search..

(6x5=30)

**Section C.**

Answer any two of the following.

Each question carries 15 marks

22) Explain different file organization methods in detail.

23) What is binary tree? Explain different traversal methods of Binary tree.

24) Explain different data structures.

25) (i). Explain the terms infix, postfix, prefix notation.

(ii).Write an algorithm for conversion of infix to postfix conversion.

(iii). Convert the infix expression to postfix (A-B)/((D+E)\*F).

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