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**SVIS 313 A-2K14**  
**B.Sc. VIth Semester Degree Examination**  
**Computer Science**  
**(Data Structure Using C++)**  
**Paper - CS-601**

Time :3 Hours

Maximum Marks : 80

**Section - A**

I. Answer **all** the questions :

(15×1=15)

- 1) Define data?
- 2) What are the various operations that can be performed on an array.
- 3) Define Circular Linked List?
- 4) What is Stack?
- 5) Define complete binary tree.
- 6) What is insertion.
- 7) Define expression Tree
- 8) What is Dis Joint set
- 9) Operations of sets are \_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_ ?
- 10) Mention the types of sorting.
- 11) Define Prefix & Postfix.
- 12) Which is the one - way List?
- 13) What is Key
- 14) Expand DFS & BFS?
- 15) Define an internal search.

Section - B

II. Answer any five questions :

(5×5=25)

- 16) Write an algorithm to search an element in an array.
- 17) Explain briefly doubly linked list.
- 18) Write a note on circular Queue
- 19) Explain Red - block Tree
- 20) Write an algorithm for Q delete
- 21) Explain Quick - sort Algorithm
- 22) Write the different operations on sets.

Section - C

III. Answer any four questions

(4×10=40)

- 23) Write a C++ Program for Linear search.
- 24) Why Queue is called as FIFO data Structure? Explain representation of Queue using a Linked list.
- 25) Explain Radix sort with an example.
- 26) What is Traversal of a binary tree? Explain the following with figure
  - a) In order
  - b) Pre - order traversal of a binary tree.
- 27) Explain Merge sort with an example
- 28) Write a C++ program for bubble sort?