
 SURESH GYAN VIHAR UNIVERSITY Accredited by NAAC with 'A' Grade		INTERNAL ASSIGNMENT - 1
Course	MCA	Data Structure Using C++
Semester	3	
Total Marks:	15	

Q.1. Write answers for any two questions from below. (5 marks each – Word limit – 500)

- A. Define in brief an array. What are the types of array operations?
- B. Explain the terms: a. Data Types b. Derived Datatypes c. Data Object d. Abstract Data Type
- C. Does the Minimal Spanning tree of a graph give the shortest distance between any 2 specified nodes?

Q.2. Write short notes on all of the following topics (1 mark each - Word limit - 100)

- A. Why we need to do algorithm analysis?
- B. What are asymptotic notations?
- C. Time Complexity
- D. What is the method to find the complexity of an algorithm? What is the use of space complexity and time complexity?
- E. Doubly Linked List

 SURESH GYAN VIHAR UNIVERSITY <small>Accredited by NAAC with 'A' Grade</small>		INTERNAL ASSIGNMENT - 2
Course	MCA	Data Structure Using C++
Semester	3	
Total Marks:	15	

Q.1. Write answers for any two questions from below. (5 marks each – Word limit – 500)

- A. What is Doubly Linked list? Implement Doubly Linked list with example.
- B. What is Single Linked list? Implement Single Linked list with example.
- C. Describe linked list using C++ with an example.

Q.2. Write short notes on all of the following topics (1 mark each - Word limit - 100)

- A. What is a spanning tree?
- B. Explain Extended Binary tree. What is a Binary tree? How to implement binary tree in C? What is the difference between B tree and Binary search tree?
- C. Circular Linked List
- D. How is a bubble sort algorithm implemented?
- E. What is stack?