

**Set No : 1**

**A 12**

**Sreenidhi Institute of Science & Technology**

(An Autonomous Institution)

**Code No: 121CS01**

**B. TECH. I – Year II – Semester Examinations, July, 2014 (Regular)**

**DATA STRUCTURES AND C ++ (Common to EEE, CSE and IT)**

**Time: 3 Hours Max. Marks: 70**

**Note: No additional answer sheets will be provided.**

**Part-A**

**Max.Marks:20**

**Answer all QUESTIONS.**

1. What is ADT ?
2. Convert the following Infix Expression to Postfix Expression A-B/(C\*D$E).
3. What is a destructor?
4. Draw the Structure of Circular Linked List and list its Operations.
5. Write Short note on Tree Terminology.
6. What is the difference between Linear & Binary search methods?
7. Write the time complexity for Bubble, Selection, Insertion & Merge sort methods.
8. What is Copy Constructor?
9. What is Friend Function?

10) What is Operator Overloading? List the Operations that cannot be Overloaded.

**Part – B**

**Max. Marks: 50**

**ANSWER ANY FIVE QUESTIONS. EACH QUESTION CARRIES 10 MARKS.**

1. Explain Queue ADT and its implementation with Arrays.
2. What is Singly Liked List? Explain various Operations on Singly Linked List.
3. Write a C++ Program to Evaluate a Postfix Expression using Stack.
4. a) Define Graph and its Terminology.

b) Explain Depth First Search Graph Traversal with a Suitable Example.

5) Explain Quick Sort Technique and Sort the List 11,51,71,21,61,41,91,31.

6) a) Write a C++ Program to Demonstrate Runtime Polymorphism using Virtual Functions? b) What does Inheritance mean in C++? What are the different forms of Inheritance? Give an Example for each.

7) a) Explain about this Pointer.

b) What is a Class? How does it Accomplish Data Hiding?

8) What is Template? Explain Class Templates and Function Templates.

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**Set No : 2**

**A 12**

**Sreenidhi Institute of Science & Technology**

(An Autonomous Institution)

**Code No: 121CS01**

**B. TECH. I – Year II – Semester Examinations, July, 2014 (Regular)**

**DATA STRUCTURES AND C ++ (Common to ECE, ME, ECM and BT)**

**Time: 3 Hours Max. Marks: 70**

**Note: No additional answer sheets will be provided.**

**Part-A**

**Max.Marks:20**

**Answer all QUESTIONS.**

1. What is the difference between Linear & Binary search methods?
2. Write the time complexity for Bubble, Selection, Insertion & Merge sort methods.
3. What is Copy Constructor?
4. What is Friend Function?
5. What is Operator Overloading? List the Operations that cannot be Overloaded.
6. What is ADT ?
7. Convert the following Infix Expression to Postfix Expression A-B/(C\*D$E).
8. What is a destructor?
9. Draw the Structure of Circular Linked List and list its Operations.
10. Write Short note on Tree Terminology.

**Part – B**

**Max. Marks: 50**

**ANSWER ANY FIVE QUESTIONS. EACH QUESTION CARRIES 10 MARKS.**

1. Explain Quick Sort Technique and Sort the List 11,51,71,21,61,41,91,31.
2. a) Write a C++ Program to Demonstrate Runtime Polymorphism using Virtual Functions? b) What does Inheritance mean in C++? What are the different forms of Inheritance? Give an Example for each.
3. a) Explain about this Pointer.

b) What is a Class? How does it Accomplish Data Hiding?

1. What is Template? Explain Class Templates and Function Templates.
2. Explain Queue ADT and its implementation with Arrays.
3. What is Singly Liked List? Explain various Operations on Singly Linked List.
4. Write a C++ Program to Evaluate a Postfix Expression using Stack.
5. a) Define Graph and its Terminology.

b) Explain Depth First Search Graph Traversal with a Suitable Example.

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