

**II Year B.Tech CSE- I Sem**

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(Common to CSE and IT)

- **Declaration** and **use** of various data types.
- **Understand** applicability for the various data structures.
- To **analyze** solutions for storage management computing problems.
- **Demonstrate** data structure problem solutions.

After completion of the course the student is able to

- **Design** applications using object oriented features.
- **Design** and Implement data structures in application development.
- **Analyze** the time complexity of the algorithms.
- **Implement** hashing techniques in application development

## C++Programs - covering- Unit-I concepts

### Advanced C++ Programs – Covering – Unit-II concepts

C++ programs to implement the following using an array and Linked List

a) Stack ADT	b) Queue ADT
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## C++ Programs to implement Priority Queue and its operations using heap, Heap Sort

### Lab Internal Examination-I

C++ Programs to implement dictionaries and its operations using.

a) Linear List                      b) Hash Table using Division Method.

## Collision Resolution Techniques- Separate Chaining, Linear Probing , quadratic Probing

### C++ Programs to implement – double Hashing and Rehashing.

**Week 14:**

Write a C++ program to perform the following operations on Binary Search Tree (BST)

- a) Creation      b) Search      c) Deletion      d) Insert    e) Display – Pre, Post and In order

**Week 15:**

Write a C++ program to perform the following operations on B-Tree of order m

- a) Creation      b) Insert    c) Display

**Week 16:****Lab Internal Examination - II****TEXT BOOKS:**

1. Mastering C++ by K.R.Venugopal , RajKumar and T.Ravishankar , TATA McGrawHill.
2. Data structures, Algorithms and Applications in C++,S.Sahni, University press (India) pvt ltd, 2nd edition, Orient Longman pvt.ltd.
3. Data Structures and Algorithm Analysis in C++, Mark Allen Weiss, Pearson Education, Second Edition.