COURSE CODE :- **CC3**
COURSE TITLE :- **DATA STRUCTURE WITH C**
CREDIT :- **4**

Marks distribution
Full Marks: 15 (MSE) + 60 (ESE) = 75   Duration: 3 hrs   Pass Marks: 34
This paper consists of 60marksand divided into two groups:
Group-A: Objective questions (Compulsory)   :   1 x 10 = 10
Group-B: descriptive questions (5 out of 8 questions)   :   10 x 5 = 50

Total =   60
        The questions must cover the entire syllabus with equal distribution of marks as far as practicable.

Module 1: Introduction to C Programming:- Basic Concepts, Algorithms, Notations,
        DataStructure Operations.Implementations of Data Structures, Mathematical Notations, Functions.

Module 2: Arrays:- Insertion and deletion of element from an Array, Static Memory Allocation.
        Searching: Linear or Sequential search, Binary Search

Module 3: Stack:-Implementation of Stack, Array- based Implementation. Applications of
        Stack.Evaluating Postfix Expression, Simulating Recursive Function Using stack.

Module 4: Queue:-Queue Implementation, Array- based Implementation.

Module 5: Linked Lists:-Dynamic Allocation of Memory, Representation of Linked List.
        Implementation of Single Linked List, Insertion, Deletion and traversing through single
        linked list.Implementation of Doubly Linked Lists, Insertion, deletion and traversing
        through Double linked list.

Module 6: Trees:- Introduction to Trees, Binary Tree, Implementation of Binary tree, Binary Tree
        Traversal Searching a Binary Tree, Binary Search tree, Insertion, Deletion and traversing
        through BST.

Module 7: Introduction to Threaded Binary Trees, AVL Tree, B and B+ Tree

Module 8: Sorting:- Bubble sort, Selection Sort, Insertion sort, Quick Sort, Simple Merge Sort,
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Books Recommended:

Data Structures – Lipschutz.

Data Structures through C-Y.P. Kanetkar.

Data Structure – Samanta

PRACTICAL: Data Structure with C
Data structure programming implementation covering entire syllabus

DEPARTMENT OF COMPUTER APPLICATION