OBJECTIVE

Learning program independent view of data structures, including its representation and operations performed on them, which are then linked to sorting, searching and indexing methods to increase the knowledge of usage of data structures in algorithmic perspective.

UNIT I: LINEAR DATA STRUCTURES 11

Abstract Data Types - Asymptotic Notations: Big-Oh, Omega and Theta – Best, Worst and Average case Analysis: Definition and an example – Arrays and its representations – Stacks and Queues – Linked lists – Linked list based implementation of Stacks and Queues – Evaluation of Expressions – Linked list based polynomial addition.

UNIT II: NON-LINEAR DATA STRUCTURES 9


UNIT III: SEARCH STRUCTURES AND PRIORITY QUEUES 9

AVL Trees – Red-Black Trees – Splay Trees – Binary Heap – Leftist Heap

UNIT IV: SORTING 8


UNIT V: SEARCHING AND INDEXING 8

Linear Search – Binary Search - Hash tables – Overflow handling – Cylinder Surface Indexing – Hash Index – B-Tree Indexing.

TOTAL: 45 PERIODS

TEXT BOOKS:

REFERENCES: