UNIT I – **STACKS AND QUEUES**
STORAGE STRUCTURES FOR ARRAYS

SPARSE MATRICES

STACKS AND QUEUES

REPRESENTATIONS AND APPLICATIONS. RECURSION

TOWER OF HANOI

DOUBLE ENDED QUEUE

PRIORITY QUEUE

INFIX TO POSTFIX

POSTFIX TO INFIX

EXPRESSION EVALUATION.

UNIT II – **LINKED LISTS**
LINKED LISTS

LINKED STACKS AND QUEUES

OPERATIONS ON POLYNOMIALS

DOUBLY LINKED LISTS

CIRCULARLY LINKED LISTS

DYNAMIC STORAGE MANAGEMENT

GARBAGE COLLECTION AND COMPACTION.

UNIT III – **TREES**
BINARY TREES

BINARY SEARCH TREES

TREE TRAVERSAL

EXPRESSION MANIPULATION

SYMBOL TABLE CONSTRUCTION

HEIGHT BALANCED TREES

MINIMUM SPANNING TREES

B-TREES

B+ TREES

APPLICATIONS.

UNIT IV – **GRAPHS**
GRAPHS

REPRESENTATION OF GRAPHS

BFS,

DFS

TOPOLOGICAL SORT

SHORTEST PATH PROBLEMS

STRING REPRESENTATION AND MANIPULATIONS

PATTERN MATCHING

APPLICATIONS.

UNIT V – SORTING AND SEARCHING
SORTING TECHNIQUES

SELECTION

BUBBLE

INSERTION

MERGE

HEAP

QUICK

RADIX SORT AND ADDRESS CALCULATION

LINEAR SEARCH

BINARY SEARCH

HASH TABLE METHODS.