Basics of Data Structure

Total Marks: 100
External Marks: 70
Internal Marks: 30
Credits: 4
Pass Percentage: 40%

Section A

Unit I: Basic concept of data, Problem analysis, algorithm complexity, Big O notation and time space trade off

Unit II: Introduction to array, stack, queue, add elements and remove elements in stack and queue at first ,last and nth location, application of stacks and queues,

Unit III: Linear and binary search, bubble sort, insertion sort, selection sort.

Unit IV: Link list, insertion, deletion, traversal

Section B

Unit V: Stack using Link list, Queue using link list,

Unit VI: double link list insertion and deletion

Unit VII: Tree terminology, Binary tree, Binary Search tree, tree traversal,

Unit VIII: Insert and remove element in BST, heap, quick sort, merge sort.

Suggested Reading:

1. Seymour Lipschutz, Data Structures (Revised First Edition)| Schaum's Outline Series

2. Michael H.Goldwasser, Data Structures and Algorithms in Python