

Paper : II Data Structure

(Compulsory Question)

1. (a) Why binary search tree is better than binary tree ?
(b) Differentiate between B-tree and m-way search tree.
(c) What is the procedure for Heap Sort ?
(d) Differentiate between path matrix and adjacency matrix.
(e) Define various type of business files.
(f) How deletion is performed in a binary search tree ?

UNIT-I

2. What is AVL search tree ? Explain rotations for insertion and deletion using suitable example.
3. (a) Write notes on :
(i) Header nodes, (ii) General tree.
(b) Generate a Huffman's tree for
Date : A B C D E F G H
Weight : 17 5 10 21 3 12 25 6 $9 \times 2 = 18$

UNIT-II

4. Explain the Dijkstra algorithm for shortest path in a graph with suitable example. 18
5. Explain in detail the Breadth First Search algorithm for traversing the graph with suitable example. 18

UNIT-III

6. (a) What are different kinds of sorting ? Explain Tournament sorting.
(b) Compare various Searching algorithms. $9 \times 2 = 18$
7. Explain Merge sort algorithm with suitable example. 18

UNIT-IV

8. Write short notes on :
(a) Hashing Algorithms, (b) File Operations. $9 \times 2 = 18$

UNIT-V

9. Describe various file organization techniques and their access mechanisms. 18