

24/12/22 (M)

Exam.Code:0929  
Sub. Code: 6598

2122  
B.E. (Electronics and Communication Engineering)  
Fifth Semester  
EC-507: Data Structure and Algorithms

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Explain the following:-

- a) What is algorithm complexity?
- b) What is transverse?
- c) What is prefix notation?
- d) Difference between linked stack and queue.
- e) What is binary tree?
- f) State two differences between B tree and Height balance tree.
- g) What is AVL?
- h) State the importance of sorting
- i) What is breadth first search?
- j) How merge sort is different from Radix sort. (10x1)

**UNIT - I**

- II. Explain the concept of Transverse, Insert and delete and sorting of data in data structures. (10)
- III. How searching and sorting of data in list can be achieved, explain. (10)
- IV. Explain the concept of link list and how storage allocation and garbage collection is possible? (10)

**UNIT - II**

- V. With the help of suitable diagrams, explain trees and their applications. Also state the advantages of B -Tree. (10)

P.T.O.

(2)

- VI. With the help of diagrams, explain spanning forests. What is the significance of Depth and Breadth first search in graphs? (10)
- VII. With the help of suitable diagrams, explain Hashing schemes. (10)

x-x-x