

Roll.No.

23UCGCT3003

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)

Chromepet, Chennai - 600 044.

B.Sc.Cs with CGS - END SEMESTER EXAMINATIONS - NOVEMBER 2025

SEMESTER - III

23UCGCT3003 - Data Structures

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Explain the conversion of infix to postfix with an algorithm with an example.
2. Illustrate the asymptotic analysis in detail.
3. Classify the tree traversals techniques with an example.
4. Explain the concepts graph with an example.
5. Describe the Divide and Conquer techniques.
6. Apply the concept of doubly linked list in a simple program.
7. Define data structures and explain the types of Data types.
8. Write an algorithm for Binary Search using divide and conquer method.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Define Arrays. Discuss about the operations on Arrays with example.
10. Apply the concept of operations of stack and queue.
11. Examine the various operations that can be performed on a singly linked list.
12. Compute the shortest path using Dijkstra's algorithm.
13. Assess the code to implement a Merge sort.
