

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.

M.Sc. - END SEMESTER EXAMINATIONS NOVEMBER - 2022

SEMESTER - II

20PCSCT2004 - Design and Analysis of Algorithm

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

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

1. Explain different types of Asymptotic Notation with neat diagram.
2. Write short notes on Knapsack Problem in Greedy Method with example.
3. Explain BFS with suitable example.
4. Discuss about Graph Coloring.
5. Draw the comparison tree for sorting four elements.
6. Explain Job sequencing with deadlines with an example.
7. Write short notes on Traveling Salesperson problem in Branch and Bound Techniques.
8. Write an Algorithm for Recursively finding the Maximum and Minimum in the given list.

Section B

Part A

Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Briefly explain about the Merge sort with Algorithm and example.
10. Sort the given list of numbers by using Quick Sort.
65,70,75,80,85,60,55,50,45
11. Describe All Pair Shortest Path with Algorithm and example.
12. Write the Non Deterministic algorithm for the following:
a) Search Algorithm b) Sorting Algorithm c) Knapsack Algorithm

Part B

Compulsory question ($1 \times 10 = 10$ Marks)

13. Discuss briefly about Backtrack solution for the 8-Queens Problem.
