

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.Computer Science - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - I

23UCSCT1001 - Problem Solving through Programming in C

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. a) Programming is process of a problem solving. Justify. 1 Mark
b) Write the steps for designing algorithm. 2 Marks
c) Define - A Flowchart 2 Marks
2. How to determine of a Number is Prime or not?
3. Differentiate while and do-while statement.
4. What is meant by recursion? Illustrate the use of recursion with a C program.
5. Discuss on Pointers and Arrays.
6. Develop an algorithm for computation of factorial and calculate its efficiency.
7. Summarize on the switch statement with suitable program.
8. Elucidate the different categories of user defined functions.

Section C

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

9. Explain different Software design techniques.
10. Design an algorithm to evaluate the function $\sin(x)$.
11. Discuss on the various Operators in C with examples.
12. Describe the various operations on arrays with example.
13. a) How can you use pointers in C ? Discuss. 5 Marks
b) How do you pass arrays to functions? Explain with examples. 5 Marks
