

Roll.No.

23UCSCT2003

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 - NOVEMBER 2025
SEMESTER - II

23UCSCT2003 - Programming using Python

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Write a Python program to swap two numbers using a temporary variable.
2. Write a Python program to remove duplicate elements from a list using sets.
3. Compare the iterative and recursive approaches for calculating factorial. Explain which is more efficient and why?
4. Create a class Shape with method area(), and derive Circle and Rectangle classes. Demonstrate method overriding.
5. Write a program to read data from a text file and display it on the console.
6. Compare and explain the output of a program using if-else versus nested if statements for decision-making.
7. Write a python program to display calender.
8. Evaluate the efficiency and readability of a Python program that uses recursion to sum a list of numbers versus using a loop.

Section C

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

9. Create a Python program to print all numbers divisible by 5 between 1 and 100.
10. Analyze how the choice of data structure (list, set, tuple, dictionary) affects the performance of a program for storing and searching data.
11. Assess the benefits of using modular functions in a large Python project.
12. Compare and contrast polymorphism achieved through method overloading and method overriding.
13. Evaluate a Python program that reads a CSV file and handles missing data using exception handling. Suggest improvements.
