

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.CGS - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - VI

**21UCGCT6011 - Python Programming and Data Structure**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### **Section B**

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

1. Explain briefly constant, variables, keywords and statements available in python.
2. Illustrate interpreter and interactive mode in python.
3. Explain string slicing with examples.
4. Explain reading and writing files in python.
5. Define tuple. What is the difference between list and tuple?
6. Explain the applications of Queue and Stack data structure.
7. Discuss the concepts of asymptotic notations and its properties.
8. Compare linear search and binary search.

### **Section C**

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

9. List the types of operators in python. Explain the different expressions involved in python.
10. Summarize iterative control statements in Python with an example.
11. Illustrate Exceptions in python with an example.
12. Explain recursion with an example.
13. Describe Merge sort. Provide the complete analysis with an example.

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