

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.CSc.(DS) - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - II

22UDSCT2002 - Java and 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 syntax and working of a switch case statement with an example.
2. What are applets in Java? Discuss the life cycle of an applet with an example program.
3. Classify the basic operations performed on a queue ADT.
4. Illustrate in-order and pre-order tree traversal methods with examples.
5. Describe the purpose of 'this' keyword in Java.
6. Define package in Java. How do you create and import a package?
7. Show the operations of stack ADT and discuss its applications.
8. Examine the process of insertion and deletion operations in Binary Search Tree with examples.

Section C

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

9. Explain the different types of operators in Java with examples.
10. Classify various string methods in Java with suitable examples.
11. Write a Java program to demonstrate exception handling using throw and throws.
12. Discuss the operations performed on a singly linked list (insertion, deletion, and traversal) in detail.
13. Examine how shortest path is calculated using Dijkstra's algorithm.
