

DEPARTMENT OF COMPUTER SCIENCE

Dyal Singh College, University of Delhi

(ACADEMIC SESSION, 2023-24)

Course: B.SC PHYSICAL SCIENCE (Part III/ VSemester)
Paper Code and Name: DATA STRUCTURES BSCS05A (TH/PR)

FACULTY

Name of Teacher: PROF HEMA BANATI

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ASSESSMENT DETAILS

Total Marks for the course is 100, comprising following components

- Attendance – 5 marks
 - Individual Assignment – 10 marks
 - Test/ Presentation – 10 marks
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TEACHING PLAN

Week	Topics Covered/ Assignments/ Test/Presentations
1-2	Single and multi-dimensional arrays, sparse matrices, linear and binary searching
3-4	Different sorting methods including bubble, selection, insertion, merge, quick sort
5-6	Implementing stack using array, prefix, infix and postfix expressions, application of stacks for conversion of infix to prefix and postfix expressions, evaluation of postfix expressions
7-8	Implementing simple queue, circular queues and priority queues using array
9-10	Single, double and circular lists
11-12	Implementing stack and queue using linked lists
13-14	Recursive solutions to simple problems and their implementation, advantages and limitations of recursion
15-16	Introduction to tree as a data structure, binary trees, binary search tree-creation and traversal techniques