Final exam contents and expected weightage.

Dynamic Safe Array	10%

- OOPs Basics
- Constructors & Destructors
- Operator Overloading

Linked-List	15%

- Singly
- Doubly
- Circular
- CRUD operations

Stack & Queues	15%

- Basics
- Stacks using queues
- Queues using stacks
- Priority Queue
- CRUD operations
- Their versions: Array and Linked List

Recursion	10%

- Basics
- Backtracking

Sorting/Hashing/Searching	10%

- Linear/Elementary Sorting (Bubble, Insertion, Selection)
- Advanced Sorting (Merge, Radix, Quick, Shell, Comb, Heap, Count)
- Searching (Linear, Binary, Interpolation & Interval)
- Hashing(Hash functions, Collision techniques: Linear Probing, Closed chaining, Quadratic Probing, Double hashing)
- CRUD operations

Trees	20%

- Basics
- Binary Tree
- Binary Search Tree
- AVL
- B-Tree
- CRUD operations

Graphs	20%

- Basic Terminologies
- Representation (Adjacency Matrix, Adjacency List)
- Searching (BFS & DFS)
- Cycle Detection
- Topological Sort
- Minimum Spanning Tree (Prim's and Kruskal's)
- Shortest Path (Dijkstra, Floyd Warshall, Bellman Ford)
- CRUD

CRUD = Create, Read, Update & Delete