Hall Ticket No: _____

Q.P. Code CS302

CSSR & SRRM DEGREE & PG COLLEGE

(AUTONOMOUS)

UG (CBCS) REGULAR EXAMINATIONS, OCT- 2025

B.Sc(CS), SEMESTER-III

MAJOR: DATA STRUCTURES USING C

(w.e.f. 2024-25 Admitted Batch)

Time: 3 hrs. (No additional sheet will be supplied) **Max. Marks: 70**

SECTION – A

I. Answer any **FIVE** questions. Each Question Carries 4 Marks 5 X 4 =20 M

1. Define Algorithm and explain its characteristics?
2. Difference between Data type and Data structures?
3. Explain difference between Linked List and Array?
4. Write an algorithm to traverse a single linked list?
5. Write the applications of Stacks?
6. Explain the representation of Queue using Linked list?
7. Explain the limitations of Bubble Sort?
8. Explain the advantages of using Linear Search over Binary Search?
9. Explain the applications of Binary Tree?
10. Explain the sequential representation of Garphs?

SECTION – B

II. Answer **All questions**. Each Question Carries 10 Marks 5 X 10 =50 M

11. Define Data Structure? Explain the types of data structures with example?

Or

12. Define Array. Write an algorithm to insert an element into one dimensional array?

13. Write an algorithm to delete a node at end of the single linked list with an example?

Or

14. Define LinkedList. Explain the types of linked lists with an example?

15. Explain the implementation of Stack using linkedlist?

Or

16. Define Queue. Explain the types of Queues with an example?

17. Explain the working of Indexed Sequential Search?

Or

18. Explain the working of Insertion Sort?

19. Define Binary Search Tree. Write an algorithm to perform insertion operation in Binary Search Tree.

Or

20. Define Graph. Explain how BFS algorithm works?