**Lab Sheet-V**

**INSTRUCTIONS**

Given below are the lab questions for the day. For each question, you should prepare a document with following titles.

1. PROBLEM
2. ALGORITHM
3. CODE (with formal coding standard)
4. TESTING
   1. INPUT SET
   2. OUTPUT

**QUESTIONS**

**[Object oriented programming features should be used]**

1. Implement a singly linked list with following functions.
2. Insert at beginning
3. Insert at last position
4. Insert at position “n”
5. Remove first node
6. Remove last node
7. Remove “n”th node
8. Find the number of elements
9. Search for a node
10. Display the list
11. Display the “nth” node
12. Implement a doubly linked list with following functions.
13. Insert at beginning
14. Insert at last position
15. Insert at position “n”
16. Remove first node
17. Remove last node
18. Remove “n”th node
19. Find the number of elements
20. Search for a node
21. Display the list
22. Display the “nth” node
23. Implement a stack using singly linked list.
24. Implement a queue using singly linked list
25. Implement a deque using singly linked list.
26. Implement a stack using doubly linked list.
27. Implement a queue using doubly linked list
28. Implement a deque using doubly linked list.