## NETAJI SUBHASH ENGINEERING COLLEGE DATASTRUCTURE & ALGORITHM LAB AEIE 3<sup>rd</sup> YEAR 5<sup>th</sup> SEMESTER

- 1. Write a program to insert an element to a particular position of an array.
- 2. Write a program to delete an element from a particular position of an array.
- 3. Write a program to implement Tower of Hanoi problem.
- 4. Write a program to print Fibonacci series of n user given numbers using recursion
- 5. Write a program to print Factorial of n user given numbers using recursion.
- 6. Write a menu driven program to implement Push, Pop, Display operations in Stack using array.
- 7. Write a menu driven program to implement Insert, Delete, Display operations in Linear Queue using array.
- 8. Write a menu driven program to implement Insert, Delete, Display operations in Circular Queue using array.
- 9. Write a menu driven program to implement Insert, Delete, and Display operations in D-QUEUE using array.
- 10. Write a menu driven program programme to do the following operations on Single Linked List
  - a) Insert at beginning
  - b) Insert at a specified position
  - c) Insert at end
  - d) Delete the first node
  - e) Delete an element from a specified position
  - f) Delete the first node
- 11. Write a menu driven program programme to do the following operations on Circular Linked List
  - a) Insert at beginning
  - b) Insert at a specified position
  - c) Insert at end
  - d) Delete the first node
  - e) Delete an element from a specified position
  - f) Delete the first node

- 12. Write a menu driven program programme to do the following operations on Double Linked List
  - a) Insert at beginning
  - b) Insert at a specified position
  - c) Insert at end
  - d) Delete the first node
  - e) Delete an element from a specified position
  - f) Delete the first node
- 13. Write a menu driven program to implement Push, Pop, and Display operations in Stack using Linked List.
- 14. Write a menu driven program to implement Insert, Delete, and Display operations in Queue using Linked List.
- 15. Write a program to sort n numbers using the following Methods:
  - a) Bubble Sort.
  - b) Insertion Sort.
  - c) Selection Sort.
  - d) Quick Sort.
  - e) Merge Sort.
  - f) Shell Sort.
- 16. Write a program to perform the Linear Search operation in an array.
- 17. Write a program to search a particular element by Binary Search Method.
- 18. Write a program to search a particular element by Interpolation Search Method.
- 19. Write a c program to convert infix to postfix expression

Last date for sign: 20/11/2015(on or before)