

**2018**

**M.Sc. 1st Seme. Examination**

**COMPUTER SCIENCE**

**PAPER—COS-191**

**(Practical)**

*Full Marks : 50*

*Time : 2 Hours*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**Data Structure Lab.**

Answer any one question.

35×1

1. Write a program to implement a stack to perform push and pop operations using function.

*(Turn Over)*

2. Write a menu driven program for a singly linked list to insert a node at beginning, at a given position and at the end of the linked list.
3. Write a menu driven program for a singly linked list to delete a node at beginning, at a given position and at the end of the linked list.
4. Write a program in which a singly linked list contains only integers. Break the linked list into two linked list where one list contains all even number node and another contains all odd number node.
5. Write a program for queue in which perform insert and delete operations using functions.
6. Write a program for circular queue operations.
7. Write a program for deque in which perform insert and delete operation using functions.

8. Write a menu driven program for a doubly linked list to insert a node at beginning, at a given position and at the end of the linked list.
9. Write a menu driven program for a doubly linked list to delete a node at beginning, at a given position and at the end of the linked list.
10. Write a program to implement Mergesort algorithm.
11. Write a program to evaluate a postfix expression.
12. Write a program for infix to prefix conversion.
13. Write a program for infix to postfix conversion.
14. Write a menu driven program for Tree Traversal in Pre-order, In-order or Post-order.
15. Write a program to search an element from an array using binary search algorithm.

16. Write a program to implement a Binary Search Tree.
17. Write a program to implement quick sort algorithm.
18. Write a program to implement AVL tree including the insert and delete operations.

*Viva-voce — 10*

*PNB — 05*

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