



# Jodhpur Institute of Engineering & Technology

## SYLLABUS

### III - Semester

#### Branch: CSE (AI and ML)

#### 3AIML4- 21 : Data Structures and Algorithms Lab

**Credit: 1.5**

**Max. Marks: 75 (IA: 45, ETE: 30)**

**OL+OT+3P**

**End Term Exam: 3 Hours**

Sr. No.	Experiments
1	Write a program for implementing the following searching techniques. a. Linear search b. Binary search
2	Write a programs for implementing the following sorting techniques to arrange a list of integers in ascending order. a. Bubble sort b. Insertion sort c. Selection sort
3	Write a program to Design and implement Stack and its operations
4	Write a program to Design and implement Queue and its operations.
5	Write a program which convert infix expression into postfix expression.
6	Write a program for the following operations on Single Linked List. (i) Creation (ii) insertion (iii) deletion (iv) traversal
7	Write a program for the following operations on Circular Linked List. (i) Creation (ii) insertion (iii) deletion (iv) traversal
8	Write a program for the following: Uses functions to perform the following operations on Double Linked List. (i) Creation (ii) insertion (iii) deletion (iv) traversal in both ways.
9	Write a programs to implement the following graph traversal algorithms: a. Depth first search. b. Breadth first search.
10	Write a programs to perform the following: a. Create a binary search tree. b. Traverse the above binary search tree recursively in pre-order, post-order and in-order.

**Tools/ software/ language : Python or C -language**