Teaching Plan Academic Year 2019-2020

Name of Teacher: P. G. Joshi

Class: B.C. A. F.Y. **Semester:** II (DIV A+B)

Course Title: Data Structure **Course Code: U-DAS-282**

Unit	Topics To be Covered	Date	No. of Lectures
Unit I	1. Introduction to Data structure and Arrays 1.1. Definitions –Data types, Data Object, Data structure. 1.2. Implementations of Data structure. 1.3. Types of Data Structure 1.4. Array-definition. 1.5. Types-one, multi dimensional, character string array 2. Algorithm analysis 2.1. Algorithm – definition, characteristics 10 2.2. Space complexity, time complexity	**16-12-19 to 14-1-20**	**20**
Unit II	3. Stack 3.1. Definition of stack. 3.2. Operation on stack. 3.3. Declaration of stack. 4. Queue 4.1. Definition of queue. 4.2. Operations on queue. 4.3. Types of queue-Linear, Circular. 4.4. Applications of queues	**16-1-20 to 29-1-20**	**10**
Unit III	5. Linked List 5.1. Concept of linked list 5.2. Implementation of Linked list 5.3. Operations on linear linked list, on circular linked list, doubly linked list 6. INTRODUCTION TO TREES 6.1. Binary Trees 6.2. Expression Trees (Infix, Prefix, Postfix Traversals) 6.3. General Trees 6.4. Search Trees 6.5. Binary Search Trees	**30-1-20 to 26-2-20**	**17**
Unit IV	7. Searching & Sorting 7.1. Searching : linear and binary 7.2. Sorting : bubble sort, selection sort, insertion sort, 8. Graph 8.1. Concept & terminologies 8.2. Graph Representation 8.3. Traversals – BFS & DFS	**7-3-20 to 29-3-20**	**15**