TEACHING PLAN FOR THEORY

Subject Teacher:Mr.Ramesh G.Patole

Subject: Data Structure using c++	**Class: F.Y.**	**Branch: MCA**	**Year 2016-2017**
Lecture No	**Scheduled Date**	**Topics to be covered on the scheduled date**	
		Syllabus Discussion, Discussion on course objective & course outcome	
Unit-1: Introduction to data structures			
1	02/01/17	Concept of data, Data types, Data Object,	
2	03/01/17	Data structure, Abstract, Data types (ADT),	
3	04/01/17	linear data structures using sequential organization: Concept of sequential organization,	
4	05/01/17	Concept of Linear data structures, arrays as ADT	
5	06/01/17	Multidimensional arrays	
6	09/01/17	Storage representations (row major and column major and their address calculation).	
7	10/01/17	Polynomial representation using arrays,	
8	11/01/17	Application of array in sparse matrix representation, addition and transpose	
Unit-II:			
9	12/01/17	Concept of linked organization	

10	13/01/17	singly linked list, doubly linked list
11	16/01/17	circular linked list and operations on above data structure
12	17/01/17	Application of linked list for Representation
13	18/01/17	and manipulations of polynomials
UNIT - III ENTERPRISE IT ARCHITECTURE		
14	19/01/17	Concept of stack and queues as ADT
15	20/01/17	Implementation of stacks using sequential and linked organization
16	23/01/17	linear queue
17	24/01/17	circular queue using sequential and linked organization
18	25/01/17	Priority Queue
19	27/01/17	Application of stack for expression conversion,
20	30/01/17	evaluation, processing of function calls,
21	31/01/17	recursion,
22	01/02/17	Application of queue in job scheduling.

UNIT - IV Non-linear Data Structures		
23	02/02/17	Trees and binary trees-concept and terminology,
24	03/02/17	Sequential & Linked representation of binary trees,

25	06/02/17	Algorithm for tree traversals,
26	07/02/17	Conversion of general tree to binary tree,
27	08/02/17	Binary search trees
28	09/02/17	Applications of binary tree : expression tree,
29	10/02/17	decision tree.
30	13/02/17	Graph: Representation of graph
31	14/02/17	Adjacency matrix and Adjacency list
32	15/02/17	Graph traversals, application of graph: connected components,
33	16/02/17	Spanning tree, Minimum cost spanning tree,
34	17/02/17	and shortest path computation.
Unit-V Searching and sorting		
35	20/02/17	Sequential, binary and Fibonacci search.
36	21/02/17	General concepts: sort order, sort stability,
37	22/02/17	efficiency and passes,
38	23/02/17	Internal and external sorting,
39	24/02/17	Bubble sort, Quick and Merge sort.
40	27/02/17	**Files:** Organization of files: sequential and direct access file

41	28/02/17	and simple index file,
42	01/03/17	hashing function and its characteristics
43	02/03/17	collision resolution,
44	03/03/17	linear probing, chaining with and without replacement
45	06/03/17	rehashing