Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India

(Autonomous Institute Affiliated to University of Mumbai)

Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
CEL31	**Advanced Data Structures Lab**	--	--	2	--	--	1	1
		Examination Scheme						
		ISE		ESE			Total	
				Practical		Oral		
		40		10		10		60

Pre-requisite Course Codes	ES4(Programming Methodology and Data Structures)
At the end of successful completion the course, students will be able to	

Course Outcomes	CO1	Experiment with Linked List Operations
	CO2	Demonstrate the Operations of Trees and Graphs
	CO3	Construct different Heap structures
	CO4	Make use of different hashing and collision resolution techniques

Exp. No.	Experiment Details	Ref.	Marks
1	Implement a given scenario using Linked List.	1,2	**5**
2	Construct an expression tree usingBinary Trees Concept	1,2	**5**
3	Develop an application to explore the uses of an AVL tree	1,2	**5**
4	Develop Search application using B-Tree.	1,2	**5**
5	Demonstrate an application using B+ Tree	1,2	**5**
6	Implement Operations of Heap Structures	2	**5**
7	Implement hash functions with different collision resolution techniques	1,2	**5**
8	Traverse a Graph using Graph Traversal Technique	1,2	**5**
		Total Marks	**40**

References:

[1] Thomas H.Cormen, Charles E. Leiserson, Ronald L Rivest, Clifford Stein, "Introduction to Algorithms", MIT Press, Massachusetts, 2009.

[2] Horowitz E, Sahni S andS.Rajasekaran, "Fundamentals of Computer Algorithms", Galgotia Publications, New Delhi, 2010