19CS3352

Data Structures Lab

Course Code	19CS3352	Year	II	Semester	Ι
Course Category	Program Core	Branch	CSE	Course Type	Practical
Credits	1.5	L-T-P	0-0-2	Prerequisites	Problem solving and Programming (19ES1102)
Continuous Internal Evaluation :	25	Semester End Evaluation:	50	Total Marks:	75

	Course Outcomes						
Upon su	Upon successful completion of the course, the student will be able to:						
CO1	Apply different design techniques for solving problems.	L3					
CO2	Implement programs as an individual on different IDEs/ online platforms.	L3					
CO3	Develop an effective report based on various programs implemented.	L3					
CO4	Apply technical knowledge for a given problem and express with an effective oral communication.	L3					
CO5	Analyze outputs using given constraints/test cases.	L4					

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CO1	3											2		
CO2					3				3					
CO3										3				
CO4	3									3				
		3												

	Course Content						
Expt.No.1	Demonstrate recursive algorithms with examples.	CO1					
Expt.No.2	Implement various searching techniques.	CO2					
Expt.No.3	Develop programs for different sorting techniques	CO2					
Expt.No.4	Implement and perform different operations on Single, Double and Circular Linked Lists.	CO3					
Expt.No.5	Develop a program to perform operations of a Stack using arrays and linked Lists.	CO3					
Expt.No.6	Develop programs to implement Stack applications.	CO3					
Expt.No.7	Develop a program to perform operations of Linear Queue using arrays and linked Lists.						
Expt.No.8	Implement Circular Queues. CO						
Expt.No.9	Develop a program to represent a tree data structure.	CO4					
Expt.No.10	Develop a program to demonstrate operations on Binary Search Tree.	CO4					
Expt.No.11	Demonstrate Graph Traversal Techniques.	CO4					
Expt.No.12	Develop a program to find Minimum cost Spanning tree.	CO4					
Text Books	 Data Structures and Algorithm Analysis in C, Mark Allen Wei Edition, 2002, Pearson. Introduction to Algorithms, Thomas H. Cormen, Charles E. Ronald L. Rivest, Clifford 						
		Leiserson,					
	Stein, Third Edition, 2010, PHI. 3. Data Structures and Algorithms Made Easy by Narasimha Karuma CareerMonk Publications.						
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