PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CSE (AI-ML)

Subject Name: - Data Structures, Subject Code:-ES-CS-AIML-203A(3rd)

Subject	Subject Name: - Data Structures, Subject Code:-ES-CS-AIML-203A(3rd				
			Lesson Plan		
	Topics to be	CO	Assignment	Teaching Methodology	
Lecture	covered	Covered			
No.					
	Introduction to	CO1	Assignment 1	White Board	
	Data Types,				
	Data Structures				
	,Operations on				
	Data Structures				
L-1					
	Arrays, LB,	CO1	Assignment 1	Smart Board	
	UB, Finding				
	address				
	element in one				
	dimensional				
	array and 2 D				
L-2	array				
	Insertion and	CO1	Assignment 1	Smart Board	
	deletion and				
	traversing				
	operation on				
L-3	linear array.				
	Three	CO2	Assignment 1	White Board	
	dimensional				
	array, Finding				
	element				
	address RMO,				
L-4	СМО				
	Sparse matrix,	CO2	Assignment 1	White Board	
	Representation				
	of sparse				
	matrix,				
	Transpose of				
L-5	sparse matrix.				
	Sparse	CO2	Assignment 1	White Board	
	Matrices,				
L-6	Storage Class				
	Memory	CO2	Assignment 1	White Board	
	allocation in C,				
	Static and				
	dynamic				
	memory				
L-7	allocation				

Bubble sort, selection sort L-8 Insertion sort Stack, LIFO, Push operation and pop L-9 operation Conversion from infix to postfix L-10 expression Conversion from infix to prefix expression, prefix to infix, Evauation of postfix and prefix expression, prefix to infix, Evauation of postfix and prefix L-12 expression L-12 expression L-13 omega notation L-14 of quick sort L-15 deletion DEQUE Insertion L-16 deletion Applications of CO3 Assignment 2 Applications of CO3 Assignment 2 Applications of CO3 Assignment 2 Assignment 2 White Board Sasignment 2 White Board White Board White Board White Board Sasignment 2 White Board White Board Sasignment 2 Sasignment 2 White Board Sasignment 2 Sasignment 2 White Board Sasignment 2 White Board Sasignment 2 Sasignment 2 White Board Sasignment 2 Sasignment 2 White Board Sasignment 2 White Board		D 111	CO2	A	g (D 1
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L-19 Implementation	J 10				
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	Traversing of	CO3	Assignment 2	White Board
	linked list,			
	Insertion as			
	first node in			
T 20				
L-20	linked list.			
	Insertion as last	CO3	Assignment 2	White Board
	node , at a		_	
	specific			
	_			
	position using			
	node number			
L-21	and node info.			
	Deletion as first	CO3	Assignment 3	White Roard
		CO3	Assignment 3	Willie Board
	node, Deletion			
	as last node,			
	deletion at			
	specific			
1 22				
L-22	position.			
	Doubly linked	CO3	Assignment 3	White Board
	list creation,			
	insertion as			
	first node and			
	insertion as last			
L-23	node			
	Insertion at	CO3	Assignment 3	White Board
	specific			
	position,			
	<u> </u>			
	deletion as first			
	node, deletion			
	as last			
	node.deletion at			
	specific			
L-24	location.			
	Circular linked	CO3	Assignment 3	Smart Board
	list creation,			
	traversing,			
	insertion and			
L-25	deletion			
	Implementation	CO4	Assignment 3	Smart Board
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	and linked			
1 20				
L-26	queue.			
	Basic tree	CO4	Assignment 3	Smart Board
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	representation			
	of Binary Tree,			
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	Tree traversal			
L-27	basic.			

	Preorder, inorder	CO4	Assignment 3	White Board
L-28	traversal, post order traversal.			
	Creation of tree	CO4	Assignment 3	White Board
L-29	from traversals.			
22	Representation	CO4	Assignment 3	Smart Board
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	prefix and postfix			
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L-30	using tree			
	AVL TREE, Insertion and	CO4	Assignment 4	Smart Board
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L-31	AVL tree.			
1 22	Heap Sort	CO4	Assignment 4	Smart Board
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L-33	and deletion	GO 4		W
	Threaded Binary trees,	CO4	Assignment 4	White Board
	Multi-way			
L-34	search trees,			
	Graph	CO4	Assignment 4	Smart Board
	terminology, memory			
	representation			
L-35	of graph,			
	Graph traversal BFS and DFS	CO4	Assignment 4	Smart Board
L-36	DES AND DES			
	MST, Prims	CO4	Assignment 4	Smart Board
1 07	and Kruskal			
L-37	Algorithm Dijkstra's	CO4	Assignment 4	White Roard
	algorithm for	CO 1	/ 1331gmmcmt 4	Willie Dould
	finding shortest			
L-38	path in graph	004	A	77/1 D 1
L-39	Floyd warshall Algorithm	CO4	Assignment 4	white Board
	Implementation	CO4	Assignment 4	Smart Board
L-40	of Merge sort			