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SECTION - B (35 Marks)Answer **ALL** questions**ALL** questions carry **EQUAL** Marks

(5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Classify the data structures.	K4	CO1
	(OR)			
	11.b.	Conclude the iteration logic.		
2	12.a.	Interpret the insertion into a sorted linked list.	K3	CO2
	(OR)			
	12.b.	Build the steps to delete the node in a linked list following a given node.		
3	13.a.	Demonstrate the linked representation of stacks.	K2	CO3
	(OR)			
	13.b.	Illustrate the linked representation of queues.		
4	14.a.	Exhibit the concept of extended binary trees.	K3	CO4
	(OR)			
	14.b.	Construct an expression tree for the expression $[a + (b - c)] * [(d - e)/(f + g - h)]$. Give the outputs when you apply the preorder, inorder and postorder traversals.		
5	15.a.	Analyze the complexity of the insertion sort algorithm.	K4	CO4
	(OR)			
	15.b.	Examine the complexity of the radix sort algorithm.		

SECTION - C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Deduce the memory representation and traversal of linear arrays.	K4	CO1
2	17	Investigate the steps of linear search algorithm and its complexity	K4	CO2
3	18	What is recursion? Write an algorithm to find $n!$ using recursion and also without using recursion. Compare them.	K4	CO3
4	19	List and explain the steps of the deletion algorithm in a binary search tree in detail.	K4	CO4
5	20	Categorize and explain the procedure to sort using merge sort.	K4	CO5

Z-Z-Z END