St. Peter's Engineering College (Autonomous)

Dullapally (P), Medchal, Hyderabad – 500100.

II - Mid Term Examination – JUNE 2024

Dept.	:	
Academic Year 2022-23		

Subject Code	:	AS22-05ES07	Subject	:	Data structures		
Class/Section	:	B. Tech. (A)	Year	:	I	Semester	:	II
Duration	:	120 Min	Max. Marks	:	30	Date:	:	

BLOOMS LEVEL					
Remember	L1	Understand	L2	Apply	L3
Analyze	L4	Evaluate	L5	Create	L6

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PART – A (10x1M = 10M)

Note: Answer all Questions. Each Question carries equal marks.

Q. No	Question (s)	Marks	BL	C
	UNIT - IV			
1	a)Define Polish Notations and write any prefix Expression.	1M		
	b)Define Queue with suitable diagram	1M		
	c)Define Stack with an example.	1M		
	d)Define Circular Queue	1M		
	UNIT – V			
	e)What is Binary Tree? Draw the diagram?	1M		
	f)What are the tree traversal methods.?	1M		
	g)Define Graph traversal .	1M		
	h)List the various operations in binary tree.	1M		
	UNIT – III			
	i)Explain the difference between Linked list and a circular linked list.	1M		
	j)Define dynamic memory allocation.	1M		

PART – B (20M)

Q. No	Question (s)	Marks	BL	C
	UNIT - V			
2	a)List the various types of a treetree and explain.	4M		
	b)Write the short notes on AVL tree.	4M		
	OR			
3	a)Explain the steps involved in Insertion operation of Binary tree.	8M		

		UNIT – IV			
4		a)Write the steps to display the elements of Circular Queue.	4M		
		b)Write the difference between direct and indirect recursion.	4M		
		OR			
5		a)Explain the process of the Tower of Hanoi with a program.	8M		
		UNIT – III			
6		a)Define a Linked list and explain the structure of a node within it.	4M		
		OR			
7		a)Discuss the difference between Singly linked list and a Doubly linked list.	4M		

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