MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

MLRS

II B.Tech I Sem Supply End Examination, July-2022
Data Structures
(CIVIL & EEE)

Time: 3 Hours.   **Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.
   2. In Part – A, answer all questions which carries 20 marks.
   3. In Part – B, answer any one question from each unit.
      Each question carries 10 marks and may have a, b as sub questions.

PART- A
                                                      (10*2 Marks = 20 Marks)

1.	a)	What are the applications of doubly linked lists?	2M	CO1	BL1
	b)	Compare static memory allocation with dynamic memory allocation.	2M	CO1	BL2
	c)	What is stack?	2M	CO2	BL1
	d)	What are the applications of queues?	2M	CO2	BL1
	e)	What is the role of pivot element in quick sort?	2M	CO3	BL1
	f)	What are the applications of merge sort?	2M	CO3	BL1
	g)	What is complete binary tree?	2M	CO4	BL1
	h)	What the difference between full binary tree & complete binary tree?	2M	CO4	BL1
	i)	What are the applications of graphs?	2M	CO5	BL1
	j)	What is graph representation?	2M	CO5	BL1

PART- B
                                                      (10*5 Marks = 50 Marks)

2	Explain the operations of circular linked lists along with program.	10M	CO1	BL4
	OR			
3	Compare singly list with doubly linked list.	10M	CO1	BL2
4	Write a program to convert infix expression to postfix expression.	10M	CO2	BL3
	OR			
5	Explain various operations of Queue along with program.	10M	CO2	BL4
6	Explain the linear search along with program.	10M	CO3	BL4
	OR			

7	Explain the Insertion sort with an example.	10M	CO3	BL4
8	Explain the construction of binary search tree.	10M	CO4	BL4

OR

9	Explain about various types of trees.	10M	CO4	BL4
10	Explain the breadth first search algorithm.	10M	CO5	BL4

OR

11	Explain various types of graphs.	10M	CO5	BL4

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