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

II B.Tech I Sem Regular End Examination, February-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 advantages of dynamic memory allocation?	2M	CO1	BL1
	b)	What are the applications of linked lists?	2M	CO1	BL1
	c)	What are the applications of Queues?	2M	CO2	BL1
	d)	What are the operations of Stack?	2M	CO2	BL1
	e)	What are the applications of binary search?	2M	CO3	BL1
	f)	What is sorting?	2M	CO3	BL1
	g)	What is binary tree?	2M	CO4	BL1
	h)	What is full binary tree?	2M	CO4	BL1
	i)	What is graph?	2M	CO5	BL1
	j)	Compare trees with graphs.	2M	CO5	BL1

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

2	Write a C program to perform operations on single linked list.	10M	CO1	BL3

OR

3	Explain the operations of circular linked lists.	10M	CO1	BL4

4	Construct stack using linked representation and describe its operations.	10M	CO2	BL5

OR

5	Write a C program to evaluate postfix expression.	10M	CO2	BL3

6	Write a C program for quick sort.	10M	CO3	BL3

7	Explain about Binary search.	10M	CO3	BL4
8	Explain about binary tree traversals.	10M	CO4	BL4

9	Explain various types of trees.	10M	CO4	BL4
10	Explain Depth first search algorithm.	10M	CO5	BL4

11	Explain the representation of graphs.	10M	CO5	BL4

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