Q.P. Code: 19MC9106 **R19**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

MCA I Year II Semester Supplementary Examinations July-2021

DATA STRUCTURES

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	**a)**	Explain Linear Data structure with examples.	**6M**
	b)	Explain Non-Linear Data structure with examples.	**6M**

OR

2		What are the various performance measurements for an array list?	**12M**

UNIT-II

3		What is stack? Explain any two applications of stack with examples.	**12M**

OR

4	**a)**	What are the applications of queue?	**6M**
	b)	How to store stack using linked list? Explain with example.	**6M**

UNIT-III

5		Write insertion, deletion and searching operations on AVL trees.	**12M**

OR

6	**a)**	What is a binary search tree? How do you insert an element into a binary search tree?	**6M**
	b)	What is traversing? Write recursive procedure for in order traversal in a binary tree.	**6M**

UNIT-IV

7		Write and explain Bubble Sort Algorithm and also find its time complexity.	**12M**

OR

8		What is searching? Explain Binary search algorithm with example and also find its time complexity.	**12M**

UNIT-V

9		Explain DFS algorithm with example.	**12M**

OR

10		Define graph. Explain various operations on graphs.	**12M**

*** END ***