

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
 (AUTONOMOUS)

MCA I Year II Semester Regular & Supplementary Examinations June/July-2025
DATASTRUCTURES

Time: 3 Hours**Max. Marks: 60**

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

UNIT-1

1 b) Apply various operations that can perform on array. [L3][CO2] [6M] CO1 L2 12M

OR

b) Explain various types of Data Structures. CO1 L2 6M

UNIT-2

3 9 What is an expression? Explain various types of expressions with example. [L2][CO2] [12M] CO1 L2 12M

OR

b) Design an algorithm to delete an element at end of circular ly linked list. [L3][CO2] [6M] CO1 L2 12M

UNIT-3

5 6 Develop B – Tree with various operations. [L6][CO3] [12M] CO1 L2 12M

OR

6 1 CO1 L2 12M

UNIT-4

7 a) Explain selection sort with an algorithm and example. [L2][CO4] [5M] CO1 L2 12M

OR

b) Design a program to demonstrate insertion sort. [L3][CO4] [7M] CO1 L2 12M

UNIT-5

9 b) Explain BFS Graph traversal with steps for the following Graph . [L2][CO5] [9M] CO1 L2 12M

OR

10 9 Explain in detail about various minimum cost spanning tree algorithms. [L2][CO5] [12M] CO1 L2 12M

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