| O.P.Code: 24mca110 | Regulation2022 | H.T.No. | | | | | | | | | | | |

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 2   CO1   L2   12M

OR

a) Identify the steps to print the product of two numbers.   CO1   L3   6M

UNIT-2

3 b) What is a Queue? What are the operations that perform on a Queue? [L1][CO2]
[6M]   CO1   L2   12M

OR

4 3 Develop Circularly Linked List with various operations. [L6][CO2] [12M]   CO1   L2   12M

UNIT-3

5 b) Prepare an algorithm to delete an element in B + Tree. [L3][CO3] [6M] Course
Code: 20MC9102 R20   CO1   L2   12M

OR

a) Explain BFS Tree Traversal with an example. [L1][CO3] [6M]   CO1   L2   12M

UNIT-4

7 9   CO1   L2   12M

OR

8 5   CO1   L2   12M

UNIT-5

9 b) Prepare an algorithm for Prim's with example. [L3][CO5] [8M]   CO1   L2   12M

OR

b) Briefly explain about Adjacency List with example. [L2][CO5] [5M]   CO1   L2   12M

*** END ***