M.Sc. 1st Semester Examination, 2023

COMPUTER SCIENCE

(*Algorithm Lab using Python*)

(Practical)

PAPER — COS-196 (M1)

Full Marks : 25

Time : 2 hours

The figures in the right hand margin indicate marks

Answer any **one** question :   20 × 1

1. Write a program using python to sort a list using Mergesort using divide and conquer strategy.

2. Implement a program using python to find out all pair shortest path of a given graph using dynamic programming approach.

3. Implement a matrix chain multiplicaion problem using dynamic programming in python.

4. Write a program using python to sort a given list using Quicksort using divide and conquer strategy.

5. Write a program using python to implement a tail-recursive and a non-tail recursive version of the same algorithm.

[PNB + Viva = 5]

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