



PG (CBCS)
M.Sc. Semester- I Examination, 2023
COMPUTER SCIENCE
PAPER: COS 196

(ALGORITHM LAB USING PYTHON & CLOUD COMPUTING LAB)

Full Marks: 25

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

M1:
ALGORITHM LAB USING PYTHON

GROUP-A

1. Answer any **ONE** of the following questions: **25 X 1 = 25**

- a) Write a python program to implement the binary search using divide and conquer strategy.
- b) Write a python program to sort a list with Merge sort using divide and conquer strategy.
- c) Write a python program to find the factorial of a number using tail recursion.
- d) Write a python program to implement matrix chain multiplication problem using dynamic programming.
- e) Write a python program to generate the nth Fibonacci number using tail recursion.
- f) Write a python program to sort a list with Quicksort using divide and conquer strategy.
- g) Write a python program to find single source shortest path using Dijkstra algorithm.
- h) Write a python program to solve a given knapsack problem using greedy approach.
- i) Write a python program to implement Breadth-First Search (BFS).
- j) Write a python program to implement Depth First Search (DFS).