Total page: 01

PG (CBCS)
M.SC Semester- II Examination, 2023
COMPUTER SCIENCE
PAPER: COS 296
(AI LAB & SOFT COMPUTING LAB)

Full Marks: 40 **Time: 4 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.
Write the answer for each unit in separate sheet

M1: AI LAB

Answer any **ONE** from the following questions: 1×20

1. Write a program to solve 8-queens problem using PROLOG .
2. Write a program in PROLOG to implement factorial (N, F) where F represents the factorial of a number N.
3. Write a Prolog program to implement max(X, Y, M) so that M is the maximum of two numbers X and Y.
4. Write a Prolog program to calculate GCD of two numbers.
5. Write a Prolog program to implement DFS.
6. Write a Prolog program to implement BFS.
7. Write a Prolog program to implement 8- puzzle problem using best first search.
8. Write a Prolog program to implement Traveling Salesman problem.

M2: SOFT COMPUTING LAB

Answer any **ONE** from the following questions: 1×20

1. Write a program to implement Union and Intersection operations using Fuzzy logic.
2. Write a program to plot trapezoidal membership functions.
3. Write a program to implement a Fuzzy Inference System.
4. Write a program to create fuzzy relation by Cartesian product of any two fuzzy sets.
5. Write a program to create fuzzy relation by perform max min composition on any two fuzzy relations.
6. Write a program to create fuzzy relation by perform max product composition on any two fuzzy relations.
7. Write a Program to implement De-Morgan's law using Fuzzy Logic.
8. Write a program for solving linearly separable problem using Perceptron Model.
9. Write a program to generate AND-NOT function using McCulloch-Pitts neural network.
10. Write a program to implement the classical Genetic algorithm.

******