PG/IIS/COS/206/25(Pr.)

M.Sc. 2nd Semester Examination, 2025

COMPUTER SCIENCE

(Practical)

PAPER – COS-206(M_1 & M_2)

Full Marks : 50

Time : 4 hours

Answer any **one** question on **lottery** basis

MODULE–I

(*Artificial Intelligence Lab*)

[Marks : 20]

1. Write a prolog program to find the maximum and minimum number in a list.

2. Write a prolog program to find the number of elements in a list and find their sum.

3. Write a prolog program to find the reverse of a list and check whether it is palindrome or not.

4. Write a program to find the number of zero in a list and delete whether it is palindrome or not.

5. Write a program to find the ascending order of the list.

6. Write a program to find a number is prime or not and the factorial of the number.

7. Write a program in prolog to add three elements at the end of a list.

[Viva — 05 Marks]

MODULE–II

(Soft Computing Lab)

[Marks : 20]

11. Write a program in MATLAB to perform union, intersection and complement operations of fuzzy set.

12. Write a Program in MATLAB to implement De-Morgan's law.

13. Write a program in MATLAB to plot trangular, trapezoidal and bell shaped membership functions.

14. Write a MATLAB program to find algebraic sum, algebric subtraction and algebraic product of two fuzzy sets.

15. Write a MATLAB program to find bound sum, bounded subtraction and bounded product of two fuzzy sets.

16. Write a MATLAB program to store the vector (1 1 1 0) and to find the weight matrix with no self-connection using a discrete Hopfield net with mistake in first and second component of vector that is (0 0 1 0).

17. Write a MATLAB program to generate ANDNOT function using McCulloch-Pitts neural net.

18. Write a MATLAB program to train and test the back propagation neural network for the generation of XOR function.

[Viva — 05 Marks]
