CHANDIGARH ENGINEERING COLLEGE CGC, LANDRAN, MOHALI
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Chandigarh Engineering College-CGC Landran, Mohali, Punjab

Ref. No. CEC/IQAC/2024-25/24

Department of Electronics and Communication Engineering

Assignment -2

Total marks-10

Branch: B Tech ECE

Subject & Subject code: Soft Computing (BTEC-908D-18)

Semester: 7th
Date on which assignment is given: 8.10.24 **Date of submission of assignment: 15.10.24**
Course Outcomes:

CO1	Understand the concepts of Soft Computing and Algorithms involved there-in.
CO2	Understand Genetic Algorithms with its operators and applications.
CO3	Learn about the Neural Network models and its applications.
CO4	Describe the Fuzzy systems and Neuro fuzzy modeling.
CO5	Learn Swarm Intelligence techniques for optimization.

Bloom's Taxonomy Levels

L1 – Remembering, L2 – Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating

Assignment related to COs	Marks	Relevance to CO No.	Blooms Levels
Q1.Justify the following statement "Partial membership is allowed in fuzzy sets"	**2**	**CO-4**	L-5
Q2.What is swarm intelligence. Examine the swarm intelligence exhibited by flocks of birds and shoals of fish, highlighting the key characteristics and self-organization mechanisms that enable their collective behavior.	**3**	**CO-5**	L-3
Q3. Compare and contrast Adaptive Neuro-Fuzzy Inference Systems (ANFIS) with Coactive Neuro-Fuzzy Modeling, highlighting their strengths, weaknesses, and suitable applications.	**3**	**CO-4**	L-4
Q4. Illustrate the principles of Ant Colony Optimization (ACO) and describe how it is inspired by the foraging behavior of ants. Discuss a real-world problem that has been effectively solved using ACO.	**2**	**CO-5**	L-2