(c) Write down the short notes on any *two* :

(CO5)

(i) Rolute-Whell Selection

(ii) Mutation Operator

(iii) Generation Cycle

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Roll No. .....

TMC–403(4)

M. C. A. (FOURTH SEMESTER)
END SEMESTER
EXAMINATION, May, 2023

SOFT COMPUTING

Time : Three Hours

Maximum Marks : 100

Note : (i) All questions are compulsory.

(ii) Answer any *two* sub-questions among (a), (b) and (c) in each main question.

(iii) Total marks in each main question are **twenty**.

(iv) Each sub-question carries 10 marks.

1. (a) What is the role of activation function ? Explain the different type of activation function and types of ANN architecture.

(CO1)

P. T. O.

(b) Differentiate between Hard and Soft Computing. Explain basic component of the soft computing. (CO1)

(c) Explain Mc-Cullah Pitts Model with realization of AND and OR Gate. (CO1)

2. (a) Explain Training process for Perception Model with example. (CO2)

(b) Explain the different steps used in Back Propagation learning algorithm. (CO2)

(c) What are the different factors affecting Back propagation ? Also list the application of Back Propagation Network. (CO2)

3. (a) Write a short note on Output layer computation and Hidden layer computation. (CO3)

(b) Explain membership function and define the fuzzy operators with example. (CO3)

(c) What is Fuzzy Quantifier ? Explain difference between Adaptive and Relative Fuzzy Quantifier. (CO3)

4. (a) Explain Fuzzification and Defuzzification with type. (CO4)

(b) Draw a general scheme of Fuzzy controller and explain each block in detail. (CO4)

(c) Explain the concept of fuzzy sets and their significance in handling uncertain and imprecise information. (CO4)

5. (a) Write down the working principle of GA. What is fitness function and crossover operator ? (CO5)

(b) Present the process of encoding solutions into chromosomes and genes and explain the importance of choosing an appropriate representation for the problem domain. (CO5)