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Total No. of Pages : 01

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## Ph.D Examination SOFT COMPUTING (CSE) M.Code : 78008

Time : 3 Hrs. INSTRUCTIONS TO CANDIDATES : Max. Marks : 100

- 1. Attempt any FIVE questions out of EIGHT question.
- 2. Each question carry TWENTY marks.
- Q1 a) What is learning in Neural Networks? Differentiate between supervised and unsupervised learning methods.
  - b) Write the types of Artificial Neural Networks and their applications.
- Q2 How back propagation is used to efficiently train artificial neural networks?
- Q3 a) Explain defuzzification method with suitable example.

b) Define Fuzzy set. Give some operations on Fuzzy set.

- Q4 By taking an suitable example show the Fuzzy Arithmetic and Fuzzy Measures?
- Q5 Define the terms chromosome, fitness function, crossover and mutation as used in genetic algorithms with examples.
- a) List some advancements in Genetic Algorithms with examples.
  - b) What is associative memory in neural network?
- Explain the classifications and advantages of Neuro-Fuzzy Hybrid Systems.
- Q8 Define following :
  - a) Hybridization
  - b) Limitation of perceptron networks

## NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.