

Roll No

MCTA-201
M.E./M.Tech., II Semester

Examination, May 2018

Soft Computing

Time : Three Hours

Maximum Marks : 70

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) What is Artificial Neural Network? Explain the taxonomy of ANN? State the applications of ANN?
b) What is importance of learning rate in ANN? Explain supervised and unsupervised learning with example?
2. a) What is Fuzzy logic? Explain how fuzzy sets are different from crisp set.
b) What is Defuzzification? What are the various methods of doing it?
3. a) Briefly explain regression trees? What is the practical utility of regression tree?
b) What is Neuro Fuzzy system? Explain one of its application.
4. a) What is Reproduction? Explain various methods used for selection in GA.
b) Solve the travelling salesman problem using genetic algorithm.

5. a) Solve the 8 puzzle problem using hill climbing algorithm.
b) Explain FRAMES, weak slot and filler knowledge structure? Construct a frame for a computer center.
6. a) Draw and explain working of Hopfield network.
b) Write an algorithm of simulated annealing.
7. a) How classification is different from clustering? Explain different clustering algorithm.
b) What is Propositional logic? What are its disadvantages and how it is overcome in predicate logic?
8. Write short notes on the following (any two):
 - a) Back propagation Neural Network
 - b) Fuzzy rule base system
 - c) Evolutionary computation
 - d) MATLAB TOOLBOX
