FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Main) Examination, April / May 2013

Subject : Soft Computing (Elective – II)

Time : 3 hours   **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. Briefly explain what is an artificial neuron.   3

2. What is the importance of threshold in perception network.   2

3. Define Delta rule.   2

4. List out the benefits of neural networks.   3

5. Describe unsupervised learning.   2

6. What is an XOR problem?   3

7. Discuss the methods of aggregation of fuzzy ruler.   3

8. What is meant by cross over point in a fuzzyset?   2

9. Compare and contrast traditional algorithm and genetic algorithm.   3

10. What is genetic programming?   2

PART – B (5 x 10 = 50 Marks)

11.a) What is a learning rate parameter?   3
   b) State the training algorithm used for Hebb network.   7

12.a) What is meant by gradient descent method?   4
   b) List the stages involved in training of backpropagation network.   6

13.a) State the advantages of associative memory.   4
   b) Draw the architecture of discrete Hopfield net.   6

14. Explain the training algorithm used in ART network.   10

15.a) Define fuzzy number.   4
   b) Describe how neural network is used to obtain fuzzy membership functions.   6

16. Explain the working of genetic algorithms with suitable example.   10

17. Write short notes on the following :
   a) Fuzzy ordering   5
   b) Applications of genetic algorithms   5

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