

**FACULTY OF ENGINEERING**

B. Tech. 4/4 (EEE/Inst.) II Semester (Main) Examination, June 2012

Subject: **Soft Computing (Elective – III)**

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. Describe the hybrid systems. 2
2. What are the applications of neural networks? 3
3. What are the factors influence the back propagation network. 2
4. Explain Delta rule for single output unit. 3
5. Describe unsupervised learning. 3
6. What is the storage capacity of BAM? 2
7. Explain Fuzzy membership function. 2
8. Describe the Lambda cut for the fuzzy set. 3
9. Explain selection operation. 2
10. Explain hybrid GA. 3

**PART -- B (50 Marks)**

- 11.(a) Explain McCulloch Pits Model. 5
- (b) How Neural Networks are classified according to network architecture. 5
- 12.(a) Explain perceptron learning rule. 4
- (b) Explain radial basis function network training algorithm. 6
13. Differentiate discrete and continuous Hopfield network. 10
- 14.(a) Explain the fuzzy operations. 5
- (b) Describe the fuzzy relations. 5
- 15.(a) Explain the working of genetic programming. 5
- (b) Write the application of genetic algorithms. 5
- 16.(a) Explain Madaline. 5
- (b) Explain linear separability. 5
17. Write short note on:
  - a) fuzzy ordering 5
  - b) Defuzzification 5