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Roll No .....

**IT-802 (GS)****B.E. VIII Semester**

Examination, May 2018

**Grading System (GS)****Soft Computing***Time : Three Hours**Maximum Marks : 70**Note :* i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain biological model of ANN. Compare it with McCulloch and pitts model. 7
- b) Describe feed forward and feedback network. 7
2. a) Define supervised and unsupervised learning? 7
- b) With the help of a block diagram, explain multilayer perceptrons. Also describe, how they are different from single layer networks? 7
3. a) Explain back propagation network? Define its characteristic and applications? 7
- b) What are counter propagation networks? Explain general structure of full CPN? 7
4. a) What is ART? Apply an ART algorithm to the following data.  
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- b) What is Fuzzy Inference System (FIS)? List the methods of FIS. 7

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5. a) Discuss the basic or standard fuzzy set operations? 7
- b) Explain any one application based on fuzzy logic? 7
6. Discuss the following terms in GA. 14
- a) Crossover
- b) Mutation
- c) Selection
7. a) Explain schema theorem in GA? 7
- b) Explain ADALINE and MADALINE? 7
8. Write a short notes (any three): 14
- a) Population and fitness in GA
- b) Fuzzy reasoning
- c) Neural network
- d) Linear separability
- e) ART2

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