

Exam. Code : 206701

Subject Code : 3668

M.Sc. (Computer Science) 1<sup>st</sup> Semester

**SOFT COMPUTING**

**Paper : MCS-105**

Time Allowed—3 Hours] [Maximum Marks—100

**Note :—** There are **four** Sections, each having **two** questions. Attempt any **five** questions, selecting at least **one** from each section. **All** questions carry equal marks.

**SECTION—A**

1. Explain following :
  - Perceptron training algorithm
  - Linear Separability.
2. Explain the architecture of back-propagation neural network. Also explain their training algorithm.

**SECTION—B**

3. Which are various differences between supervised and unsupervised learning ?
4. Write notes on following :
  - Adaptive Resonance Theory
  - Bidirectional Associative Memory.

**SECTION—C**

5. Explain various features of Genetic algorithms. How do these algorithms differ from Traditional algorithms ?
6. Explain various applications of fuzzy logic. What do you mean by neuro-fuzzy systems ?

**SECTION—D**

7. What are dependent and independent events ? Give an example. What is conditional probability ? State and explain Baye's theorem.
8. Explain the relationship between fuzzy logic and probability theory.