

Exam. Code : 208602

Subject Code : 8394

M.Sc. (Information Technology) Semester-II

FUZZY SYSTEMS

Paper-MIT-204

Time Allowed—3 Hours]

[Maximum Marks—100

Note :— Attempt any FIVE questions. Each question carries equal marks.

1. What do you mean by Fuzzification ? Discuss in detail, the different methods used for Membership value assignment.
2. Compare the following :
 - (i) Alpha-cuts and Strong Alpha-cuts
 - (ii) Fuzzy Relations and Crisp Relations
 - (iii) Fuzzy Expert Systems and Non-Fuzzy Expert Systems
 - (iv) Classical Equivalence Relation and Fuzzy Equivalence Relation.
3. How can one measure the Fuzziness ? Discuss different measures in detail.
4. What do you mean by Fuzzy Neural Networks ? Discuss their characteristics in detail.

5. What do you mean by Fuzzy Genetic Algorithms ? Explain the tuning process involved in Fuzzy Genetic Algorithms.
6. Explain in detail the methods employed for converting Fuzzy form into Crisp form. Also differentiate between Centroid method and Center of Largest Area method.
7. Discuss the use of Fuzzy Logic in the implementation of Pattern Recognition System.
8. Discuss the following :
 - (a) Use of Probability theory in Fuzzy Logic
 - (b) Fuzzy Approximate Reasoning.