

S-781

Total Pages : 3

Roll No. -----

MCS-E2

Introduction to Soft Computing

Master of Computer Application (MCA)

3rd Semester, Examination 2022(Dec.)

Time: 2 Hours

Max. Marks: 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

Section – A

(Long Answer – type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

[2 x 19 = 38]

P.T.O.

- Q.1. Define Fuzzy logic and Fuzzy set with example. Explain in detail fuzzy logic applications.
- Q.2. Explain genetic algorithm with flow chart and its various operator with example.
- Q.3. Define neural networks. Explain different types of neural based on architecture.
- Q.4. Define ANN and its architecture. Explain various application of ANN.
- Q.5. Explain the characteristics and different classification of a neuro-fuzzy hybrid system.

Section – B

(Short-answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only.

[4 x 8 = 32]

- Q.1. Explain soft computing and its applications.
- Q.2. Explain Back Propagation Algorithm with its merits and demerits.
- Q.3. What are Fuzzy Relations? Explain bipartite and direct graph of fuzzy relation.
- Q.4. Explain various types of defuzzification techniques.
- Q.5. Explain various types of crossover techniques.
- Q.6. Explain the concepts of Genetic Fuzzy Systems.
- Q.7. What is fuzzy inference system? Explain the working principle of FIS with suitable diagram.
- Q.8. Explain MOEA Approaches with an example.
