P-885

MCS-E2

Introduction to Soft Computing

Master of Computer Application (MCA)

3rd Semester Examination, 2023 (June)

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. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

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.

(2×19=38)

1. Explain soft computing in details. Distinguish between soft computing and hard computing with example.

2. Explain the concept of Genetic Parameters and Genetic Operators with suitable example.

3. Explain fuzzy system and its applications in details.

4. Explain in detail different search techniques in Genetic Algorithm. Discuss its merits and demerits.

5. Explain the working of back propagation learning algorithm in detail with suitable diagram and example.

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.   (4×8=32)

1. Explain genetic algorithm cycle in detail with examples?

2. What is meant by fuzzy set? Discuss the operations on fuzzy sets.

3. Explain fuzzy rule based system with the help of a block diagram.

4. Explain different types of Encoding Techniques with example.

5. What do you understand by training, testing & validation i ANN?

6. Discuss the various applications of ANN.

7. Elaborate on neuro-fuzzy inference system.

8. Explain the activation functions used in Artificial Neural Network with graphical representations.

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