A–1309

Total Pages : 3 **Roll No. .....**

MCS-E3

(MCA)

Fuzzy Logic and Neural Network

Examination February, 2026

Time : 2:00 Hrs. 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 answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section–A

(Long Answer Type Questions) (2×19=38)

***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.

1. State and explain the generalized delta learning rule applied in back propagation algorithm. Give suitable diagram.

2. Explain the application of neural networks in character recognition.

3. Explain what is an artificial neural network and show how a basic ANN is constructed from a biological neuron concept.

4. What is the difference between fuzzy reasoning and fuzzy clustering.

5. Discuss application of neural network such as pattern recognition and optimization.

Section–B

(Short Answer Type Questions) (4×8=32)

***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.

1. Compare LMS and Perceptron Learning Laws.

2. Explain Recurrent Neural Network.

3. What is Rule Based Learning ?

4. What is radial basis function ?

5. Explain the organization of brain in detail.

6. Write a short note on artificial neural network architectures.

7. Explain Genetic Neural System.

8. Discuss counter propagation network.

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