Roll No. | | | | | | | | | | | | Total No. of Pages : 01

Total No. of Questions : 08

Ph.D in Faculty of Engineering (ECE)

NEURAL NETWORKS AND FUZZY LOGIC

M.Code : 77380

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT question.
2. Each question carry TWENTY marks.

1. a) Define Biological neurons. How they are used in forming the memories?

   b) Write the types of Artificial Neural Networks and its applications in classification.

2. a) Discuss the steps for training of Artificial Neural Networks.

   b) Define error correction and gradient decent rules in supervised learning.

3. a) What is learning in Neural Networks? Differentiate between supervised and unsupervised learning methods.

   b) Write the functioning of Hopfield Networks in ANN.

4. Explain the back propagation algorithm including the parameters and their selection while using in artificial neural networks.

5. Explain with architecture the training algorithm used in Kohonen self organizing feature map.

6. a) Discuss the use of bidirectional associative memory in Unsupervised Learning.

   b) Demonstrate how a fuzzy set is described by a membership function?

7. By taking an suitable example show the Fuzzy Arithmetic and structure of Fuzzy rule based system.

8. Define following :

   a) Defuzzification Technique

   b) Hamming Networks

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.