Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

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M.Tech.(ECE) (2016 Batch) (Sem.–1)

NEURAL NETWORKS & FUZZY LOGIC

Subject Code : MTEC-104

M.Code : 74149

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

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

1. Explain Recurrent back propagation method along with its limitations.
2. Differentiate clearly between PID, Fuzzy and Fuzzy Neural Control.
3. Explain CMAC Networks & ART networks in detail.
4. Write short notes on :
   a. Various Optimization Techniques.
   b. VLSI implementation of Neural Network.
5. What is Fuzzy database? What type of information can be kept in a fuzzy database?
6. Distinguish between :
   a. Feedforward and feedback Neural Network.
   b. Supervised and Unsupervised Learning.
7. Explain speech recognition system using neural networks.
8. Find final weights of a single layer network after three steps of Hebbian learning with bipolar binary neuron used having initial weight vector w = [3 –1 0.5] needs to be trained using the set of three input vectors as below for an arbitrary choice of learning constant =1. The transposed inputs are :

   X1= [2 –2 1.5] , X2 = [1 –0.5 –2] , X3 = [0 2 –2]

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.