Roll No. | | | | | | | | | | | | |  Total No. of Pages : 1

Total No. of Questions : 08

M.Tech.(EPDT)EL-II (2016 & Onwards) (Sem.–2)

# SOFT COMPUTING TECHNIQUES

Subject Code : MTET-209

Paper ID : [74404]

Time : 3 Hrs. Max. Marks : 100

**INSTRUCTIONS TO CANDIDATES :**

1. **Attempt any FIVE questions out of eight questions.**
2. **Each question carries TWENTY marks.**
3. **Missing data if any can be suitably assumed.**

1. Discuss the history of development of neural networks. Differentiate supervised and unsupervised learning. Give suitable examples. (10+10)

2. Discuss the features of a simple Kohonen self organizing network with 2 inputs and 49 outputs Show how this is deployed as a competition based network paradigm for data clustering and how the network is trained. (20)

3. Explain the method of designing a fuzzy logic controller of a non-linear system. (20)

4. Explain the architecture and algorithm for the full counter propagation network. (20)

5. Discuss SVM approach using mathematical equations and diagrams. (20)

6. Discuss the properties and training of CMAC network. (20)

7. Suppose there is equality $a + 2b + 3c + 4d = 30$, genetic algorithm will be used to find the value of a, b, c, and d that satisfy the above equation. (20)

8. Write short notes : (10+10)

   a) Basic Learning Laws.

   b) Defuzzification methods.