Roll No.

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M.Tech.(EPDT)EL-II (2016 & Onwards) (Sem.-2) SOFT COMPUTING TECHNIQUES

Subject Code: MTET-209 M.Code: 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.
- 1. a) Explain the model of a neuron with diagram.
 - b) What are the different topologies used for representing a neuron?
- 2. Illustrate the process of learning in soft computing techniques. Also, define and explain supervised, unsupervised and reinforcement learning.
- 3. a) What are basic learning laws? Explain with diagram.
 - b) Illustrate competitive learning in the context of supervised learning.
- 4. a) What is the Kohonen's feature maps? Also, illustrate its applicability.
 - b) Explain the reasons of utility of K-means algorithm.
- 5. a) What is recurrent back propagation?
 - b) Differentiate between CMAC network and ART network.
- 6. Explain associative memories and speech and decision making. How neural network concepts can be used in these applications? Illustrate with example.
- 7. a) Explain the operation of fuzzy sets and IF-THEN rules.
 - b) How fuzzy logic can be used in anti lock breaking system?
- 8. Explain:
 - a) Energy support vector classification in detail.
 - b) Evolution of genetic algorithms.

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.

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