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Total No. of Pages : 01

Total No. of Questions : 08

PHD (ECE & CSE) NEURAL NETWORKS AND FUZZY LOGIC

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carries TWENTY marks.
- Q1. Discuss in detail about the biological neurons memory in neural networks. Also explain about the structure and function of a single neuron.
- Q2. Explain in detail about the basic approach of the working of artificial neural networks.
- Q3. a) Describe in brief about Radial Basis Function (RBF) network and its learning strategies.

b) Explain multi-layer network architecture in detail.

- Q4. Discuss in brief about the Hamming networks in unsupervised learning. Also explain about the Kohonen's self-organizing map in detail.
- O5. a) Discuss in detail about the stability of equilibrium states in neurodynamical models.
 - b) Explain the Brain-state-in-aBox network in detail.
- Q6. a) What do you understand by fuzzy logic? Also discuss the basic concepts of fuzzy logic in detail.
 - b) Explain in brief about the applications of fuzzy logic.
- Q7. a) Discuss about fuzzy relations and approximate reasoning in detail.

b) Discuss fuzzy vs. crisp set linguistic variables in detail.

Q8. Discuss about the various research aspects in neural networks and fuzzy logic in detail.