

Code: R7410201

R07

B.Tech IV Year I Semester (R07) Supplementary Examinations, May 2013

**NEURAL NETWORKS AND FUZZY LOGIC**

(Common to EEE and E.Con.E)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain the functioning of an artificial neuron.  
(b) List the potential applications of ANN.
- 2 (a) Write explanatory notes on neural dynamics.  
(b) Distinguish between supervised and unsupervised learning strategy.
- 3 (a) Give the limitation of perceptron model.  
(b) Differentiate between perceptron representation and perceptron training.
- 4 (a) State Kolmogorov theorem and list few learning difficulties and improvements.  
(b) Discuss local minimum and global minimum.
- 5 (a) Explain Hebbian learning.  
(b) Explain storage and recall algorithm.
- 6 (a) Discuss the types of De-fuzzification.  
(b) Mention few properties of fuzzy sets.
- 7 (a) With neat sketch of Venn diagrams, explain the operation of crisp sets.  
(b) Write short notes on cardinalities.
- 8 (a) Write the mathematical expression of the membership function and sketch the membership function.  
(b) Explain the process of fault diagnosis using ANN.

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