

**M.Tech 3rd Semester (ECE) (CBCS) Scheme
Examination, December-2018**

NEURAL NETWORK AND FUZZY LOGICS

Paper-16ECE23C1

Time allowed : 3 hours

[Maximum marks : 100

Note : Question No. 1 is compulsory. Attempt four more questions selecting one question from each unit. All questions carry equal marks.

1. Write short notes on the following:
 - (i) Explain the component of BNN and correlate them with ANN.
 - (ii) Differentiate between Fuzzy and Probability theory.
 - (iii) Explain basic Reshaping functions.
 - (iv) Why reset mechanism is essential in ART network? Explain.
 - (v) Explain how Neural Network Principles are useful in control applications.
 - (vi) Explain Unsupervised Learning.
 - (vii) Differentiate between Fuzzy Set and Crisp Set.
 - (viii) What are Linguistic Hedges?

Unit - I

2. Explain the History of development in neural networks principles step by step.
3. What is Neural Networks? Discuss its working model. Write its Characteristics and Applications.

Unit - II

4. What is K-means clustering algorithm? Explain in detail.
5. Give Basic learning laws in RBF nets.

Unit - III

6. What are Radial basis function neural networks? Write its characteristics.
7. Explain the CMAC and ART Networks in detail.

Unit - IV

8. What is Fuzzy sets? Explain the Operations of fuzzy sets by taking a suitable example.
9. Write a short note on the following:
 - (a) Membership functions,
 - (b) Fuzzyfication and De-Fuzzification