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