

22675

**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.

22675-P-2-Q-9(18)

[P. T. O.]

(2)

22675

**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

22675