

**B. Tech. Sem – VIII (Biomedical Engg.) (2014 COURSE) (CBCS) :**  
**SUMMER - 2019**

**SUBJECT : ELECTIVE – IV : FUZZY LOGIC AND NEURAL NETWORK**

Day : Thursday  
Date : 30/05/2019

Time : 02.30 PM TO 05.30 PM  
Max Marks : 60

**S-2019-2939**

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**N.B.:**

- 1) All Questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat diagram **WHENEVER** necessary.
  - 4) Assume suitable data, if necessary.
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- Q.1 Define Linguistic variable with example. (10)  
OR
- Q.1 Define  $\alpha$  – cuts, Core, Support of Fuzzy sets. (10)
- Q.2 Analyze Mamdani Fuzzy Inference Model for two inputs and one output. (10)  
OR
- Q.2 What is role of defuzzification? Explain any two defuzzification methods. (10)
- Q.3 Construct Washing machine application based on FLC. (10)  
OR
- Q.3 From design Engineer point of view, write assumptions in Fuzzy control system design. (10)
- Q.4 What are the applications of Neural computing? Write ANN characteristics. (10)  
OR
- Q.4 Compare Supervised, Unsupervised and reinforcement learning paradigms. (10)
- Q.5 Write Multilayer Perceptron Algorithm in detail (10)  
OR
- Q.5 Summarize RBFN design steps. (10)
- Q.6 Analyze application of ANFIS for classification and regression. (10)  
OR
- Q.6 Summarize Hybrid learning algorithm. (10)

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