

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2018

**NEURAL NETWORK & FUZZY LOGIC**

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 70

**PART – A**  
(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

- (a) Discuss neural processing.
- (b) Define Hebbian rules.
- (c) Define discrimination function.
- (d) Discuss learning factors.
- (e) What is association encoding?
- (f) What is association decoding?
- (g) Discuss basic concept of fuzzy logic.
- (h) Discuss operation of fuzzy sets.
- (i) Explain fuzzy controller.
- (j) Write industrial applications of fuzzy logic.

**PART – B**

(Answer all five units, 5 X 10 = 50 Marks)

**UNIT – I**

2 Discuss neuron modeling using feedback networks.

**OR**

3 Explain Widrow-Hoff learning rules.

**UNIT – II**

4 Explain error back propagation training.

**OR**

5 Elucidate feed forward recall training.

**UNIT – III**

6 Discuss improved coding of memories.

**OR**

7 Elucidate performance evaluation for memory.

**UNIT – IV**

8 Elucidate fuzzy sets and crisp sets.

**OR**

9 Explain properties of fuzzy sets in detail.

**UNIT – V**

10 Elucidate fuzzification and defuzzification.

**OR**

11 Discuss fuzzy membership rules and fuzzy implications.

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