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Roll No. : .....

**322840(22)**

**B. E. (Eighth Semester) Examination, April-May 2021**

(New Scheme)

(CSE, IT Engg. Branch)

**NEURAL NETWORK and FUZZY LOGIC**

*Time Allowed : Three hours*

*Maximum Marks : 80*

*Minimum Pass Marks : 28*

*Note : Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) and (d) of each question.*

**Unit-I**

1. (a) Define topology in neural network. 2
- (b) What are three main difference among three models of artificial neurons, namely McCulloh-Pitts perceptron and Adaline. 7

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- (c) Discuss the various neural network architecture in detail. 7
- (d) Explain the Perceptron learning algorithm in detail. 7

**Unit-II**

2. (a) What is Recall in neural network? 2
- (b) Describe memory models in neural network. 7
- (c) Explain credit assignment problem with neat diagram. 7
- (d) Differentiate between Supervised and Unsupervised learning strategies in detail. 7

**Unit-III**

3. (a) Define generalized Delta rule. 2
- (b) Explain the least mean algorithm in detail. 7
- (c) State and prove the perception convergence theorem. 7
- (d) Compare & contrast Adaline and Madaline. 7

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**Unit-IV**

4. (a) Define Talking Network. 2
- (b) Differentiate between Character and Handwritten recognition in detail. 7
- (c) Describe the different application of pattern recognition. 7
- (d) Discuss phonetic typewriter application. 7

**Unit-V**

5. (a) What is Fuzzy Associative Memory? 2
- (b) Explain various operations on fuzzy sets. 7
- (c) Describe fuzziness in neural network. 7
- (d) Describe defuzzification in detail. 7

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