Printed Pages: 01 **Sub Code: NBC804**

Paper Id: 900044 **Roll No.** | | | | | | | | | | |

MCA

(SEM VIII) THEORY EXAMINATION 2018-19

NEURAL NETWORK

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. Define Synapse.
b. What do you mean by Reinforced Learning?.
c. Define Perceptron learning rule.
d. Explain Fault Tolerance.
e. What are the characteristics of Fuzzy logic?
f. Give the basic equations of the various activation function?
g. Draw the ADALINE model with teacher.
h. What do you mean by Storage capacity of Neural network?
i. What is Aggregation function?
j. What is Hopfield net?

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SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. What are the various activation function? Explain them schematically.
b. Apply Hebb rule method to train patterns that define the AND NOT function and find the solution.
c. Single layer perceptron cannot represent Exclusive-OR. Justify this statement.
d. Distinguish between Learning and Training.
e. Explain the operations on the Fuzzy relations.

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain the various applications of Neural Networks?
(b) What do you mean by Unsupervised learning? Explain any two techniques of unsupervised learning.

4. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain the difference between Pattern recognition and classification.
(b) Explain any two Normalization techniques used in Data processing.

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain Auto associative memory with its characteristics and limitations.
(b) Explain Kohonen network..

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) Explain the Hamming Net and also write down its algorithm
(b) Explain common applications of SOM.

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) What do you mean by Fuzzy Controller? Explain its various applications.
(b) Discuss the Neuro-Fuzzy Genetic Algorithm Integration.