Roll No. ....

OLE-24489

B. Tech. 7th Sem. (CSE)
Examination – April, 2021

NEURAL NETWORKS

Paper : CSE-407-F

Time : Three hours]   *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions by selecting *one* question from each Section. Question No. **1** is *compulsory*. All questions carry equal marks.

  1. Write short note on the following :

    (a) Derive Delta Learning.

    (b) Write about Error back-propagation training.

    (c) Explain Hopfield networks.

    (d) Explain unsupervised learning.

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SECTION – A

2. Explain Hebb Learning rule with its algorithm. Also realize AND function for bipolar data.

3. What is Perceptron ? Explain it in Detail. Also realize it for AND function for bipolar data.

SECTION – B

4. Explain Error Back-Propagation training algorithm by taking a suitable example.

5. Explain Single Layer Continuous Perceptron Networks for linearly separable classifications.

SECTION – C

6. What is Associative Memory ? Give its types.

7. Use the Hebb Rule to store the vector (1 1 -1 -1) in an Auto Associative Network. And

    (a) Find the Weight Matrix

    (b) Test the net with input vector

    (c) Test with one mistake in input

    (d) Test with one missing in input

    (e) Test with two missing in input

    (f) Test with two mistake in input

SECTION – D

8. Explain unsupervised learning of clusters with suitable example.

9. Explain Winner -lake all learning rule with a suitable example.

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