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Department of Computer Science & Engineering

Home Assignment 3

Programme Name: MCA.

Semester: III

Course Code: CS33103

Course Name: Soft Computing

Instructions:

1. *This is a handwritten assignment. You need to scan the written assignment and post the solution. You can keep the hard copy for preparation of examination.*
2. *Last date of submission is 30/10/2020.*

- Q.1 What is content addressable memory?
- Q.2 Explain the Hebb rule training algorithm used in pattern association.
- Q.3 Draw the architecture of an autoassociative network.
- Q.4 What is a bidirectional associative memory network?
- Q.5 What is a Hop field net? Discuss
- Q.6 What is the energy function of a discrete Hopfield network?
- Q.7 Train a hetero-associative network to store the, input vectors $s = (s_1, s_2, s_3, s_4)$ to the output vector $t = (t_1, t_2)$. The training input-target output vector pairs are in binary form. Obtain the weight vector in bipolar form. The binary vector pairs are as given in Table 4.

	S1	S2	S3	S4	T1	T2
1	1	0	0	0	0	1
2	1	1	0	0	0	1
3	0	0	0	1	1	0
4	0	0	1	1	1	0