VIT
Vellore Institute of Technology

School of Information Technology and Engineering

Winter Semester 2022-2023 - Fresher

Continuous Assessment Test – I

Programme Name & Branch : MCA

Course Name & code: Soft Computing (ITA6004)

Class Number (s): 0298

Slot: D2+TD2

Faculty Name (s) (Dr. Anitha A)

Exam Duration: 90 Min. **Maximum Marks: 50**

1. Differentiate between following: [2x5=10]
   (i) Hard Computing and Soft Computing
   (ii) Artificial Neuron and Biological Neuron

2. Implement AND function using McCulloch-Pitts neuron (take binary data). [10]

3. Find the weights using perceptron network for ANDNOT function when all the inputs are presented only one time. Use bipolar inputs and targets. Consider initial weights and bias is set to 0 and learning rate as 1. The truth table for ANDNOT is given below. [10]

X1	X2	Target
1	1	-1
1	-1	1
-1	1	-1
-1	-1	-1

4. Explain the working of Back Propagation Network with the help of suitable diagram. [10]

5. Write short notes on the following: [5x2.5=10]
   (i) Delta Learning Rule
   (ii) Accuracy and Precision
   (iii) Bias
   (iv) RBF Network