K. J. Somaiya College of Engineering, Mumbai-77
(Autonomous College Affiliated to University of Mumbai)
Semester: **August–November 2021**
In-Semester Examination

Class: TY B. Tech
Branch: Computer **Semester : V**
Full name of the course: Soft Computing **Course Code:2UCE504**
Duration: 1hr.15 min (attempting questions) +15 min (uploading) **Max. Marks: 30**

Q. No	Questions	Marks
Q1	**1.1** McCulloh-Pit's neuron model can accept input in_____ form(s). a)Integer b) Bipolar c) Boolean d) Electrical signal **1.2** Soft computing deals with : a)Imprecision , Uncertainty , Partial truth and Approximation b) Deterministic, certain, complete and precise information c) Computer generated data, Big data, analytics d) pure conceptual algorithms, processes, system calls **1.3** The process of adjusting the weight is known as? a) activation b) learning c)synchronization d)bias **1.4** Neuron can send what signal at a time a) one b)two c)multiple d)three	10 marks(1 mark each)

1.5 The _____'s law states that: If two neurons on either side of a connection are activated synchronously, then the weight of that connection is increased.
a)hebb
b)MC Culloch pits
c)perceptron
d)Boltzman

1.6 In the Kohenen's network, a neuron learns by shifting its weights from _____ connections to _____ones
a) inactive to active
b) active to inactive
c) bias, output error signal
d) output error signal, bias

1.7 Which of the following can be used for data clustering?
a) Single layer perception
b)Multilayer perceptron
c)Radial basis function
d) Self organizing maps

1.8 How many types of Artificial Neural Networks?

a) 2
b) 3
c) 4
d) 5

1.9 What is an auto-associative network?

a) a neural network that contains no loops
b) a neural network that contains feedback
c) a neural network that has only one loop
d) a single layer feed-forward neural network with pre-processing

	1.10 Neural Networks are complex _____ with many parameters. a) Linear Functions b) Nonlinear Functions c) Discrete Functions d) Exponential Functions	
Q2	2.1 Design Not logic using McCulloch Pits neuron model 2.2 Difference between supervised and unsupervised learning **OR** Explain application of Neural network in Pattern classification.	5 marks 5 marks 10 marks
Q3	Determine weights after 2 iterations for Hebbian learning of a single neuron network starting with initial weight. W=[1,-1] .Inputs X1 =[1,-2] X2 = [2 ,3] ,X3 =[1,-1] and c = 1.Use bipolar Binary activation function.	10 marks