

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2172009****Date: 03/12/2018****Subject Name: Soft Computing Applications****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Explain Mamdani Architecture in detail.	03
	(b) Define characteristics of neural networks.	04
	(c) Explain Mc Culloch and Pitt's model.	07
Q.2	(a) Discuss the Value Encoding.	03
	(b) Define and explain the unsupervised learning.	04
	(c) Define Soft Computing. Explain its importance. How is Soft Computing different from Hard Computing?	07
	OR	
Q.3	(c) Discuss Kohonen's self organizing networks in detail.	07
	(a) Discuss the Tree Encoding	03
	(b) Explain sugeno Architecture in detail.	04
	(c) Explain Adaptive Resonance Theory.	07
	OR	
Q.3	(a) Discuss the Permutation Encoding.	03
	(b) Enlist and explain different of defuzzification in brief.	04
	(c) Explain MLP problem with linear activation function.	07
Q.4	(a) Explain the working of artificial neuron.	03
	(b) Differentiate between classical relations vs Fuzzy relation.	04
	(c) Write short note on MEDALINE and ADALINE.	07
	OR	
Q.4	(a) What is NETTALK?	03
	(b) State the features of membership functions	04
	(c) What are hybrid systems? Explain various hybrid systems.	07
Q.5	(a) Give the advantages of Neural Network.	03
	(b) What are the applications of genetic algorithm?	04
	(c) With a suitable case explain application of soft computing in detail.	07
	OR	
Q.5	(a) What is Neocognitron?	03
	(b) Explain the working principle of genetic algorithm.	04
	(c) Write short note on AI vs ANN.	07
