

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2017****Subject Code: 2172009****Date: 18/11/2017****Subject Name: Soft Computing Applications(Departmental Elective - II)****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) Define Soft Computing. Explain its importance.	03
	(b) How is Soft Computing different from Hard Computing?	04
	(c) What is the different property of fuzzy sets?	07
Q.2	(a) Define the bias and threshold.	03
	(b) Differentiate the supervised and unsupervised learning.	04
	(c) Discuss back propagation networks in detail with neat sketches.	07
OR		
	(c) Differentiate between biological neuron and artificial neuron on the basis of structure.	07
Q.3	(a) Discuss the Permutation Encoding.	03
	(b) Write the need of defuzzification in fuzzy set theory.	04
	(c) What is unsupervised learning? Discuss Kohonen's self organizing networks in detail.	07
OR		
Q.3	(a) Discuss the Permutation Encoding.	03
	(b) Enlist and explain different of defuzzification in brief.	04
	(c) Write short note on AI vs ANN.	07
Q.4	(a) Write short on NETTALK.	03
	(b) What is mamdani type fuzzy inference?	04
	(c) With a suitable case explain application of soft computing in detail.	07
OR		
Q.4	(a) Explain the limitation of back propagation learning.	03
	(b) Compare mamdani and sugeno systems.	04
	(c) Explain Mc Culloch and Pitt's model.	07
Q.5	(a) Give the advantages of Neural Network.	03
	(b) Write short note on ADALINE.	04
	(c) Explain Fuzzy Inference System (FIS)?	07
OR		
Q.5	(a) Explain machine vision.	03
	(b) Write short note on MEDALINE.	04
	(c) Explain Adaptive Resonance Theory.	07
