Seat No.:		Enrolment No		
		GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER IV (NEW) – • EXAMINATION – SUMMER 2016		
Subject Code: 2740203		Code: 2740203 Date:04/05/203	Date:04/05/2016	
Subject Name: Soft Computing Time: 10:30 am to 01:00 pm Instructions: 1. Attempt all questions.		70		
	2. 3.	Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	What is soft computing? Indicate biological analogies of the basic techniques of soft computing?	07	
	(b)	What are the Major Area and Application of Soft Computing with example?	07	
Q.2	(a) (b)	Enlist and discuss reproduction methods in genetic algorithm. What are the main ideas to evaluate of Multi-level Optimization in Soft Computing?	07 07	
	(b)	OR Discuss various operations of fuzzy sets with example.	07	
Q.3	(a) (b)	What is defuzzification? Describe different methods of defuzzification. What are limitations of single layer perception model? How it can be overcome.	07 07	
Q.3	(a) (b)	OR Discuss Backpropagation algorithm in detail with proper illustration. Compare Neuro-Fuzzy Hybrid Systems and Neuro-Genetic Hybrid Systems	07 07	
Q.4	(a) (b)	Explain different neural network architectures. Draw a flowchart and explain Evolutionary Algorithms with Fuzzy components.	07 07	
0.4	(.)	OR	05	
Q.4	(a)	Explain following set-theoretic operation on fuzzy sets, i) Containment ii) Union iii) Intersection iv) Complement v) Cartesian Product and Co-product	07	
	(b)	Discuss Rule based Neural Fuzzy Modeling with example.	07	
Q.5	(a) (b)	How to evaluate Neuro Fuzzy Controllers in Neural Network with example. Write a note on Fuzzy Classification.	07 07	
0.5	(c)	OR With next elected applein Francy Declaremensation (DD) analytecture	Λ.	
Q.5	(a) (b)	With neat sketch explain Fuzzy Backpropagation (BP) architecture, Draw architecture of Fuzzy ARTMAP and explain in detail.	07 07	

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