Seat No.:	Enrolmen
No	

		GUJARAT TECHNOLOGICAL UNIVERSITY ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016	
Subject Code: 2720719			6
	U	Name: Artificial Intelligent Application to Power System	
Ti	me:1	0:30 am to 01:00 pm Total Marks: 7	0
Ins	structio 1. 2. 3.	Attempt all questions.  Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Explain Fuzzy IF-THEN rule along with fuzzy inference system.  What are the evolution steps of Genetic Algorithm? Draw Flowchart. Explain selection methods applied to Genetic Algorithm.	07 07
Q.2	(a) (b)	Discuss in brief various types of learning methods in neural network.  Explain difference between Artificial Intelligence and Human intelligence.  OR	07 07
	<b>(b)</b>	What is Artificial Neural Network? Explain with suitable example.	07
Q.3	(a) (b)	What are the different methods of defuzzification? Explain anyone with an example.  Define following terms:  (1) -cut (2) Linguistic variable (3) Membership Function (4) Fuzzy singleton (5) Fuzzification (6) Cross-over (7) Mutation.	07 07
		OR	
Q.3	(a)	Explain the following genetic representations with appropriate illustrations.  (a) Octal (b) Binary (c) Hexadecimal	07
	(b)	Draw different membership functions with its mathematical equations used for Fuzzy logic.	07
Q.4	(a) (b)	Discuss in brief various types of learning methods in neural network.  How artificial neural network can be useful for load forecasting of electric power system.  OR	07 07
Q.4	(a) (b)	Explain about training and testing in context of artificial neural network.  Explain Architecture of Back propagation Network.	07 07
Q.5	(a)	How Fuzzy logic can be useful for load balancing of electric power three phase distribution system.	07
	<b>(b)</b>	State different types of neural networks. Write a short note on any one.  OR	07
Q.5	(a) (b)	Suggest neural network based design for power system security assessment. Explain recurrent networks and Multi layer feed forward network.	07 07

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