GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

Su Su	Subject Code: 2720719 Date: 11/12/2015 Subject Name: Artificial Intelligent Application to Power System		
Time:2:30 pm to 5:00 pm Total Marks: 7 Instructions:			70
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	 Define following terms: (1) -cut (2) Linguistic variable (3) Membership Function (4) Fuzzy singleton (5) Fuzzification (6) Cross-over (7) Mutation. 	07
	(b)	Discuss basic structure of ANN.	07
Q.2	(a) (b)	Explain Fuzzy IF-THEN rule along with fuzzy inference system. What is Artificial Intelligence? Briefly describe characteristics and advantages of it.	07 07
	(b)	With appropriate example explain complement, union and intersection operations on fuzzy membership functions.	07
Q.3	(a) (b)	Discuss various selection methods used with Genetic Algorithm. Discuss working of GA using flow chart.	07 07
Q.3	(a) (b)	OR How neural network can be useful for dealing issues related to voltage stability in Power system? How Eurgy logic can be useful for load belancing of electric power three phase	07
	(0)	distribution system.	07
Q.4	(a)	Explain the following genetic representations with appropriate illustrations. (a) Octal (b) Binary (c) Hexadecimal.	07
	(b)	How neural network can be useful for dealing issues related to economic load dispatch of Power system?	07
04	(a)	UR How artificial neural network can be useful for nower system security assessment	07
Q.4	(a) (b)	State different types of neural networks. Write a short note on any one.	07 07
Q.5	(a)	Explain difference between soft and hard computing.	07
	(b)	Explain about training and testing in context of artificial neural network.	07
05	(9)	UK Explain defuzzification process implemented with fuzzy logic.	07
V 10	(a) (b)	How artificial neural network can be useful for load forecasting of electric power system.	07
