PVP 12

Code: **EEPC1T6A**

I M.Tech-I Semester-Regular Examinations-April 2015

A I TECHNIQUES

(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1 Draw and explain the Biological Neural Network model. Explain how the Artificial Neural Network is formulated using the Biological Network? 14 M

2 a) State and prove Perceptron convergence theorem. 7 M

b) Compare the Discrete and Continuous Perceptron Networks. 7 M

3 Draw the sketch of Radial Basis Function (RBF) network and explain training of the neural network. 14 M

4 a) What two requirements should a problem satisfy, in order to be suitable for solving it by GA? 7 M

b) Briefly explain about crossover operator and Mutation Operator. 7 M

5 a) Briefly explain search termination criteria in genetic algorithm. 7 M

b) With the help of the flowchart, explain the steps involved in solving a problem using Genetic Algorithm ? 7 M

6 a) Explain about the cardinality of fuzzy sets. 7 M

b) Explain about uncertainty, operations & properties of fuzzy sets. 7 M

7 a) Explain the method of converting defuzzication to crisp sets. 7 M

b) Explain in detail different methods of defuzzification. 7 M

8 Explain how AI technique is used to load flow problem. Discuss what type of inputs are required, training and testing of the network. 14 M