PVP 12

Code: **EEPC1T6A**

I M.Tech - I Semester - Regular Examinations – February-2016

AI TECHNIQUES
(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. Explain different learning methods in Neural networks. 14 M

2. a) State and prove Convergence Theorem. 7 M

   b) Discuss the limitations of the perceptron model. 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 a 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. Define the following: 14 M

i) Fuzzy Logic ii) Degree of Membership

iii) Linguistic Variables iv) Membership function

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

b) Compare crisp set and fuzzy set. 7 M

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