Reg. No. : | | | | | | | | | | |

Question Paper Code: 52502

M.E. DEGREE EXAMINATION, MAY 2017

Elective

Power Electronics and Drives

15PPE604 – SOFT COMPUTING

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) (i) State the training and application algorithm of the ADELINE net. (10)

(ii) Explain in detail the algorithm for Hebb rule used in pattern association. (10)

Or

(b) (i) What is artificial intelligence? How it differs from natural intelligence? (10)

(ii) Compare soft computing and hard computing. (10)

2. (a) Explain ART under the following headings: (i) Architecture (ii) Working (iii) Training (iv) Implementation. (20)

Or

(b) Analyze the Training and Testing operation of a Recurrent Neural Network. (20)

3. (a) Explain the different types of membership function used in fuzzification process. (20)

Or

(b) (i) Explain Fuzzy Vs Crisp set. (5)

(ii) What is Defuzzification? Explain different methods Defuzzification. (15)

4. (a) Summarize the sequential procedures involved in the cross over and reproduction phase of GA with typical examples. (20)

Or

(b) Write a detailed note on Ant colony search technique for solving an optimization problem. (20)

5. (a) Explain ANN-GA-Fuzzy synergism and its application. (20)

Or

(b) (i) What is Hybrid system and explain in detail. (15)

(ii) What is ANFIS and explain in details. (5)