

K15P 0539

Reg. No. : .....

Name : .....

Third Semester M.C.A. Degree (Reg./Supple./Improve.)  
Examination, January 2016  
(2014 Admn.)

Elective - I : MCA 3E 04 : SOFT COMPUTING

Time : 3 Hours

Max. Marks : 80

SECTION - A

(Answer any ten questions. Each question carry three marks). (10×3=30)

1. What is soft computing ?
2. List the various types of soft computing techniques and mention some application areas for Neural Network.
3. Explain the working of a self organizing map.
4. Compare soft computing Vs hard computing.
5. Why Hopfield network is called as recurrent Neural Network ?
6. What are the properties of adaptive resonance theory ?
7. What is adaptive resonance theory ?
8. What is Union in Fuzzy Set operation and intersection in Fuzzy operation ?
9. What is TABU search ?
10. How does the ANT colony optimization differ from evolutionary programme of Genetic Algorithm (GA) and what are the parameters of GA ?
11. What is a hybrid intelligent control ?
12. Define linear and non-linear system.

P.T.O.



## SECTION - B

(Answer all questions. Each question carry ten marks).

(5×10=50)

13. a) Define Bidirectional Associative Memory (BAM) and its type.

OR

b) Explain Kohonen self-organizing map.

14. a) How crossover is performed ? Explain various crossover techniques of Genetic Algorithm.

OR

b) What do you understand by optimization ? Explain Genetic Algorithm in this context.

15. a) Fuzzy set is an extension of Crisp Set - Explain.

OR

b) Design a Lebbian network to implement logical OR function. Train the network with bipolar input and target.

16. a) State Charles Darwin theory of natural evolution.

OR

b) What is encoding in Genetic Algorithm ?

17. a) Explain linearly separable and linearly non-separable problem with suitable example.

OR

b) Discuss training algorithm of discrete Hopfield network.