Total No. of Questions :8]

SEAT No. :

P3635

[Total No. of Pages :2

[4959] - 1124

B.E. (I.T.)

SOFT COMPUTING

(Semester - I) (414456 A) (Elective - I) (2012 Course)

Time : 2½ Hours] *[Max. Marks :70*

Instructions to the candidates:

1) ***Neat diagram must be drawn whenever necessary.***
2) ***Figures to the right indicate full marks.***
3) ***Assume suitable data if necessary.***

Q1) a) What is Boltzman machine? With neat sketch explain its architecture. **[8]**

b) What are the issues related to representation of knowledge? **[6]**

c) List out the strength and weaknesses of Back Propagation algorithm. **[6]**

OR

Q2) a) Explain in brief architecture of multilayer feed - forward neural network. **[8]**

b) What is difference between behavior of intelligent system and knowledge based system? **[6]**

c) What is vigilance parameters in ART network? **[6]**

Q3) a) What is Extension Principle for fuzzy arithmetic? Perform following operations. **[9]**

i) Multiplication

ii) Division

b) Define and explain classical relations and fuzzy relations. **[8]**

OR

P.T.O.

Q4) a) List and explain methods employed for membership value assignment. **[8]**

b) With suitable block diagram, explain construction and working of fuzzy inference system? **[9]**

Q5) a) What is difference between genetic algorithm and genetic programming? **[8]**

b) With the neat flowchart explain operation of simple genetic algorithms. **[9]**

OR

Q6) a) Is it advisable to apply genetic algorithm for all kinds of optimization problems? Justify. **[8]**

b) What are types of crossover and mutation techniques? **[9]**

Q7) a) Describe an application how soft computing can be used in mobile ad-hoc networks. **[8]**

b) Mention the application areas of neuro-fuzzy hybrid soft computing approach. **[8]**

OR

Q8) a) Describe an application how soft computing can be used in information retrieval. **[8]**

b) Describe an application of evolutionary computing in image processing. **[8]**