

Total No. of Questions : 8]

SEAT No. :

P3241

[Total No. of Pages : 2

[4859] - 1061

B.E. (I.T.) (Semester - I)

SOFT COMPUTING

(2012 Pattern) (Elective - I)

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) Comment on differences between behaviour of intelligent system and knowledge based system? [6]
- b) List out the strength and weaknesses of artificial neural network. [6]
- c) Explain with neat diagram the architecture of Hopfield neural network. [8]

OR

- Q2)** a) Explain various techniques for knowledge representation. [8]
- b) With neat diagram explain learning in perceptron model. [6]
- c) Explain the steps involved in clustering by KNN. [6]

- Q3)** a) Explain following fuzzy set operations with example. [9]
- i) Empty fuzzy set
 - ii) Normal fuzzy set
 - iii) Equal fuzzy set
- b) List out the characteristics features of fuzzy logic. [8]

OR

P.T.O.

- Q4)** a) What is the Alpha-Cut method for discrete fuzzy sets? Explain following arithmetic operations. [9]
i) Addition
ii) Subtraction
b) List the merits and demerits of fuzzy logic. [8]

- Q5)** a) Explain how genetic algorithm differs from conventional optimization algorithms. [8]
b) What are operators in Genetic Algorithms? List and Explain GA operators in brief. [9]

OR

- Q6)** a) Explain how genetic algorithms are different from evolutionary programming. [8]
b) Is it advisable to apply genetic algorithm for all kinds of optimization problems? Justify. [9]

- Q7)** a) Describe an application of fuzzy for character recognitions. [8]
b) Describe an application how soft computing can be used in software engineering. [8]

OR

- Q8)** a) Describe an application of evolutionary computing in image processing. [8]
b) Describe an application how soft computing can be used in semantic web. [8]

