

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGI-[SUPPLEMENTARY] EXAMINATION, APRIL 2014

(2009 Scheme)

CS 09 706 L19—SOFT COMPUTING

Time: Three Hours

Maximum: 70 Marks

Part A

Answer all questions.

- I. (a) Define soft computing.
 - (b) What do you mean by artificial neural network?
 - (c) What is the main difference between probability and fuzzy logic?
 - (d) Define Cross over point.
 - (e) List the advantages of neural networks.

 $(5 \times 2 = 10 \text{ marks})$

Part B

Answer any four questions.

- II. (a) Explain the operators in genetic algorithm.
 - (b) State the importance of genetic algorithm with an example.
 - (c) List the characteristics of unsupervised learning.
 - (d) Write short notes on Fuzzy relations.
 - (e) Define membership function and state its importance in fuzzy logic.
 - (f) Mention the advantages of SVM.

 $(4 \times 5 = 20 \text{ marks})$

Part C

Answer all questions.

III. (a) Explain the working of Simulated annealing with an example.

Or

- (b) Discuss the major goals and genetic algorithm designing issues.
- IV. (a) Explain briefly about Competitive Networks with example.

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(b) Write short notes on Hopfield Network along with its limitations.

V. (a) Explain the major applications of Fuzzy Relations.

Or

- (b) Explain Operations on Fuzzy sets with an example.
- VI. (a) Explain in detail about the SVM applications with example.

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(b) Discuss the role of Harmony search in problem solving.

 $(4 \times 10 = 40 \text{ marks})$