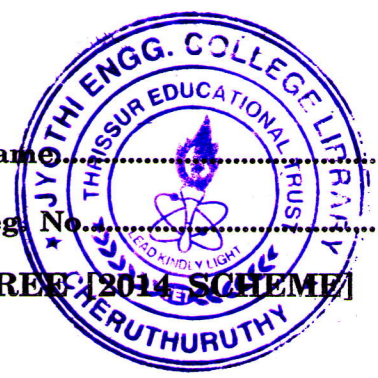


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Name

Reg. No.



**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME]
EXAMINATION, NOVEMBER 2017**

Computer Science Engineering
CS/IT 14 705 A—SOFT COMPUTING

Time : Three Hours

Maximum : 100 Marks

Part A

Answer any eight questions.

Analytical/problem solving short questions :

1. Name any four techniques used in soft computing.
2. Write the Pseudo code of Genetic Algorithm.
3. What are the implementation issues in genetic algorithms ?
4. Describe the different activation functions used in ANN.
5. List the applications of neural networks.
6. Mention the application of Fuzzy Sets.
7. Compare fuzzy relations and composition techniques.
8. What is meant by associative learning ?
9. What are the limitations of SVM ?
10. List the advantages of Swarm intelligence.

(8 × 5 = 40 marks)

Part B

Answer all questions.

Analytical/Problem solving descriptive questions :

11. (a) Summarize the sequential procedures involved in the cross over and reproduction phase of GA with typical example.

Or

- (b) Maximize the function $f(x) = x^2$ where $0 < x < 31$ using genetic algorithm.

12. (a) What do you mean by fuzzy sets ? What are alpha cuts and strong alpha cuts, explain by taking any suitable example.

Or

Turn over

- (b) Draw the architecture and explain the algorithm of Back Propagation Network.
13. (a) Draw the Block diagram of a fuzzy logic control system and explain.

Or

- (b) Explain in detail about Fuzzy Relations and Fuzzy Measures.
14. (a) Explain the classification using Support Vector Machine.

Or

- (b) Explain Harmony Search Algorithm for optimization.

(4 × 15 = 60 marks)