

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

MCA-504(C)

M.C.A. V Semester

Examination, June 2020

Soft Computing

(Elective - II)

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) What is artificial neural network? Discuss its characteristics.
b) Explain single layer neural network architecture using perceptron model with suitable activation function.
2. a) Explain architecture of bidirectional associative memory. How retrieval is performed in BAM?
b) Explain Hopfield network. Discuss its applications.
3. a) Explain error back propagation training algorithm with the help of flowchart.
b) Differentiate between ART network and CPN network.
4. a) Define.
i) Linguistic variable
ii) Linguistic hedges
b) What is fuzzy inference system? Explain the working principle of FIS with suitable diagram.

MCA-504(C)

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[2]

5.
 - a) What is genetic algorithm compare and contrast traditional algorithms with genetic algorithm?
 - b) With a neat flow chart, explain the operation of genetic programming. How are data represented in genetic programming?
6.
 - a) Discuss the applications of genetic algorithm.
 - b) Explain in detail different defuzzification techniques.
7.
 - a) What is meant by fuzzy set? Discuss the operations on fuzzy sets.
 - b) What is meant by genetic fuzzy rule based system? Explain in detail.
8. Write short notes on any three.
 - i) Lambda-cuts for fuzzy sets
 - ii) Neuro-hybrid system
 - iii) Madeline network
 - iv) Competitive learning

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