MSC23122 -Soft Computing Techniques Paper-II

P. Pages : 2

GUG/W/18/2881

Time : Three Hours

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Max. Marks : 80

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Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and well labelled diagram whenever necessary.
3. Avoid vague answers and write specific answers related to questions.

1. Either

a) State the difference between soft computing and Hard computing.   **8**

b) Explain AO* Algorithm in detail.   **8**

OR

c) Define soft computing Techniques and explain its history.   **8**

d) Explain the various knowledge representation issues   **8**

2. Either

a) Explain Biological neuron as well as structure and function of single neuron.   **8**

b) Explain error back propagation algorithm.   **8**

OR

c) State and explain perceptron training algorithm.   **8**

d) What is ANN? Explain single layer network.   **8**

3. Either

a) Explain fuzzy interface system and fuzzy reasoning in detail.   **8**

b) Explain the following: **8**

i)   Crisp Logic.

ii) Crisp Relation & Fuzzy relation.

OR

c) Explain the features of membership functions in detail.   **8**

d) Explain the decomposition and aggression of fuzzy rule.   **8**

4. Either

    a)   Explain the working principle of Genetic algorithm.   **8**

    b)   Explain Generation cycle in detail.   **8**

<p align="center">OR</p>

    c)   Explain Evolutionary algorithm and also explain how it is different from other traditional methods.   **8**

    d)   Explain the convergence of Genetic Algorithm.   **8**

5.   Solve all the questions.

    a)   Write a short note on production system.   **4**

    b)   Explain ADALINE and MADALINE in short.   **4**

    c)   What is fuzzy set theory? Explain.   **4**

    d)   Explain Genetic operator in detail.   **4**

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