M.C.A. - I (Two Years Programme) New CBCS Pattern Semester-II
PSMCAT202 - Paper-II : Soft Computing Techniques

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

Either:

1. a) Explain soft computing and Hard computing in detail. **8**

b) What is production system? Explain its types. **8**

OR

c) Explain Depth first technique in detail. **8**

d) Write and explain A* Algorithm in detail. **8**

Either:

2. a) Explain structure and functions of single neural. **8**

b) Discuss characteristic and applications of Artificial neural network (ANN) **8**

OR

c) Explain error back propagation algorithm in detail. **8**

d) Write a detail note on MADALINE. **8**

Either:

3. a) Differentiate between fuzzy set and crisp set. **8**

b) Write a detail note on fuzzy Interface system. **8**

OR

c) Explain fuzzy rule based system in detail. **8**

d) Explain application of fuzzy logic in detail. **8**

Either:

4. a) Explain working principle of genetic algorithm. **8**

b) Write a note on- **8**

    i) Mutation operator

    ii) Bitwise operator

OR

c) Discuss difference and similarity between Genetic algorithm and other traditional methods. **8**

d) Write a note on- **8**

    i) Encoding

    ii) Fitness function

5. Attempt all the questions.

    a) Explain application of soft computing. **4**

    b) Write a short note on ADALINE. **4**

    c) Explain fuzzy relation in brief. **4**

    d) Write a note on convergence of Genetic algorithm. **4**

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