M.Sc.- II (Computer Science) CBCS Pattern Semester-III

PSCST10 - Paper-II : Soft Computing Techniques

P. Pages : 2 **GUG/W/23/11233**

Time : Three Hours * 6 2 6 1 * Max. Marks : 80

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

Either:

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

b) Write and Explain A* algorithm in detail. **8**

OR

c) Explain following- **8**

a) Prepositional logic

b) Predicated logic

d) Write a detail note on Best first search. **8**

Either:

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

b) Write a detail note on ADALINE. **8**

OR

c) Write a detail note on perceptron training algorithm. **8**

d) Explain characteristic and applications of ANN. **8**

Either:

3. a) Explain the concept of fuzzy set verses crisp set. **8**

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

OR

c) Explain features of membership functions. **8**

d) Explain the process of fuzzy interface and how it is applied in fuzzy logic system. **8**

Either:

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

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

a) Mutation operator

b) Bitwise operator

OR

c) Write a detail note on generational cycle in genetic algorithm. **8**

d) Explain advantage of genetic algorithm. **8**

5. Attempt all questions.

a) Write applications of soft computing. **4**

b) Explain characteristic of EBPA. **4**

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

d) Write a short note on fitness functions. **4**

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