

M.Sc. - II (Computer Science) (C.B.C.S. Pattern) Sem-III
PSCST10-Paper-II : Soft Computing Techniques

P. Pages : 1

Time : Three Hours



GUG/S/19/11233

Max. Marks : 80

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- Notes :
1. All the questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagrams and use supporting data wherever necessary.
 3. Avoid vague answers and write specific answers related to questions.

- 1.** Either
- a) What is soft computing? Explain various of soft computing techniques in brief. **8**
 - b) Write a brief note on **8**
 - i) Breadth First search.
 - ii) Depth first search
- OR**
- c) Explain the various types of production system also explain it's characteristics in detail. **8**
 - d) Explain Hill climbing and Best first search in detail. **8**
- 2.** Either
- a) What is neural network? Explain the structure and functions of biological neural, in brief. **8**
 - b) What is ANN? Write the difference between ANN and human brain. **8**
- OR**
- c) Explain MLP in brief with its different activation functions. **8**
 - d) Write, Limitations, characteristics and Applications of EPBA. **8**
- 3.** Either
- a) Explain fuzzy set theory in brief. Also differentiate between fuzzy set versus crisp set. **8**
 - b) What is fuzzy interface system? Explain in detail with suitable example. **8**
- OR**
- c) What is Membership function in fuzzy logic? Explain its features in brief. **8**
 - d) Write a note on fuzzy decision making and application of fuzzy logic. **8**
- 4.** Either
- a) What is Genetic modeling? Explain its basic concept in detail. **8**
 - b) Explain Basic working principle of Genetic Algorithm. **8**
- OR**
- c) Write a brief note on: **8**
 - i) Mutation operator
 - ii) Bitwise operator.
 - d) Explain fitness function in detail. **8**
- 5.** Attempt all the questions.
- a) Explain A* algorithm. **4**
 - b) Write derivations of BBPA. **4**
 - c) Explain decomposition and aggregation of fuzzy rule. **4**
 - d) Explain the inheritance operator in GA. **4**
