

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

CS-801-GS

B.E. VIII Semester

Examination, December 2020

Grading System (GS)

Soft Computing

Time : Three Hours

Maximum Marks : 70

Note : i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain various types of production systems.
b) Discuss with example hill climbing techniques.
2. a) Define the architecture of perceptron? Explain Linear separability?
b) Explain in detail the algorithm for Hoff rule used in pattern association.
3. a) Compare and contrast Supervised, Unsupervised and Reinforcement learning.
b) Explain the working of counter propagation network by giving its architecture.
4. a) Discuss the applications of Genetic algorithm.
b) What is similarity between GA and other traditional methods?

CS-801-GS

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[2]

5. a) Let a function $f(x) = x - \frac{x^2}{16}$ be defined on the interval $[0, 31]$. Apply Genetic Algorithm for determining the maximum of the given function (Assume suitable missing data).
- b) Explain different types of mutation function in Genetic Algorithm?
6. Write short notes on:
- a) Crossover operator and its types
- b) Tournament and Rank Selection
7. a) Give the properties on fuzzy sets and also explain the operations involved in it?
- b) Explain in detail the generation cycle of genetic algorithm.
8. Explain Generalized Modus Ponens (GMP) and Generalized Modus Tollens (GMT) with help of an example.
