Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

CS-801 (GS)

B.E. VIII Semester

Examination, November 2019

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. Define the architecture of a perceptron? What do you mean by linear separability?

3. Consider the two pairs of patterns with bipolar symbols
A1 = (+1, +1, −1) and B1 = (−1, +1, −1, +1)
A2 = (+1, −1, +1) and B1 = (+1, −1, +1, −1)
Calculate the weights for 2 × 2 Bidirectional Associative Memory (BAM)

4. Explain Generalized Modus Ponens (GMP) and Generalized Modus Tollens (GMT) with help of an example.

5. Differentiate the following:
i) Forward Reasoning Vs Backward Reasoning
ii) Monotonic Reasoning Vs Non Monotonic Reasoning

6. a) What is fuzzy inference system? Discuss various methods of fuzzy inference system.
b) What is fuzzy logic? Explain its importance.

7. Give the mathematical derivation of error back propagation algorithm when activation function is sigmodial. Also explain the importance of momentum in EBPA.

8. a) What is Multi-layer perceptron? Explain different types of activation functions.
b) Describe error back propagation algorithm with its characteristics.

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