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Roll No .....

IT-8002 (CBGS)

B.E. VIII Semester Examination, June 2020

Choice Based Grading System (CBGS)

Soft Computing

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain McCulloch-Pitts neuron model with help of an example.
   b) What is learning in Neural network? Compare different learning rules?

2. a) Explain perceptron learning with help of an example.
   b) Explain the working of back propagation neural network with neat architecture and flow chart.

3. a) State and justify the role of vigilance parameter in ART network.
   b) Explain the applications of neural network in data compression and image compression.

4. a) What is self organizing map and discuss the algorithm and features of Kohonen's map?
   b) Explain the model of artificial neuron and explain its various activation functions and characteristics.

5. a) Explain the three types of fuzzy inference systems in detail.
   b) How stability is ensured in fuzzy control system? Analyze with reference to global Network computation.

6. a) Explain genetic algorithm in detail with the help of flowchart.
   b) What are hybrid systems? Explain Adaptive Neuro Fuzzy Inference System (ANFIS) with help of example.

7. a) What are the different kinds of encoding, selection, crossover, mutations of GA? Explain each type with suitable example.
   b) Explain any four defuzzification methods with suitable example.

8. Write short notes on:
   a) Travelling Salesman Problem
   b) Fuzzy operations
   c) Job scheduling problem
   d) Fuzzy reasoning

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