SOFT COMPUTING

CSE/T/425E or CSE / T / 424G

Answer any 5 questions : 5 X 5 = 25

1. What is soft computing? How it differs from traditional hard computing ? 3+2=5
2. What are the differences between supervised and unsupervised learning algorithms? Explain briefly. 5
3. Illustrate Back-Propagation learning algorithm by means of a flowchart. 5
4. What are the differences between Perceptron and Gradient-descent search ? What do you mean by Hebb learning? 3+2=5
5. What do you mean by elitism selection properties of GA ? What are the pros and cons of it? 3+2=5
6. What is the role of activation function in learning ? 5
7. Discuss pros and cons of different defuzzification methods with a proper example. 5
8. Consider three fuzzy sets given by: 5

   P = {(x , 1),(y, 0.2),(z, 0.5)}

   Q = {(a, 0.9), (b, 0.4), (c, 0.9)}

   R = {(x, 0.1),(y, 0.2),(z, 0.7)}

   Find the fuzzy relation for the Cartesian Product of P and Q i.e. R = P X Q.

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