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- Notes :
1. Solve Question 1 OR Questions No. 2.
 2. Solve Question 3 OR Questions No. 4.
 3. Solve Question 5 OR Questions No. 6.
 4. Solve Question 7 OR Questions No. 8.
 5. Solve Question 9 OR Questions No. 10.
 6. Solve Question 11 OR Questions No. 12.

1. a) Discuss conventional AI in detail. 7
b) Explain the characteristics of soft computing. 6
OR
2. a) Define fuzzy. Explain the various fuzzy extension principles. 7
b) Explain fuzzy theoretic operation in detail. 6
3. a) Explain Sugeno Fuzzy model in detail. 7
b) How the Random search is carried out? Explain in detail. 7
OR
4. a) Explain the crossover & mutation technique of Genetic Algorithm. 7
b) Explain the working of Downhill simplex search in detail. 7
5. a) Explain the working of Back-Propagation neural network with neat architecture & flowchart. 7
b) What are supervised and unsupervised learning? 6
OR
6. a) Explain Feed-forward Network in detail. 7
b) Describe Radial basis function network. 6
7. a) What is Hopfield Network? Explain it in detail. 7
b) Explain the working of Korhonen self-organizing networks. 7
OR
8. a) Explain Hebbian learning. 7
b) Describe vector Quantization. 7
9. a) Explain ANFIS Architecture. 7
b) Describe Hybrid learning algorithm. 6
OR
10. a) Discuss k-means clustering algorithm. 7
b) Explain Mountain Clustering method. 6
11. a) How Rule base structure Identification is carried out? 7
b) Write a note on Focus set-based Rule Combination. 6
OR
12. Explain the working of Handwritten Numeral Recognition system in detail. 13



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The secret of getting ahead is getting started.

~ Mark Twain

