NagpurStudents

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IT'S HARD TO BEAT A PERSON WHO NEVER GIVES UP.

Babe Ruth, American professional baseball player

B.E. (Computer Science & Engineering) Eighth Semester (C.B.S.)

Elective-III : Soft Computing Techniques

P. Pages : 2

Time : Three Hours

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness.
9. Assume suitable data whenever necessary.
10. Diagrams should be given whenever necessary.
11. Illustrate your answers whenever necessary with the help of neat sketches.
12. Use of non programmable calculator is permitted.

1. a) What is soft computing? Explain constituents & conventional AI. **6**

   b) Explain Fuzzy theoretic operation in detail. **8**

OR

2. a) Define Neuro-Fuzzy & soft computing characteristics. **7**

   b) Explain Fuzzy if – than Rule in detail. **7**

3. Explain Tsukamoto Fuzzy model & Genetic Algo in detail. **13**

OR

4. Explain Mamdani Fuzzy model & sugeno fuzzy model in detail. **13**

5. a) Explain Architecture of adapting Network in detail. **6**

   b) What is supervised learning neural network. Explain in detail. **7**

OR

6. a) Explain feed forward network. **6**

   b) What is Back-propagation multi layer perceptions? Explain. **7**

7. a) What is learning vector Quantization? Explain the process in detail. **7**

   b) What are the principals of component network? Explain in detail. **6**

OR

8.	a)	Explain Kohonen self organizing network.	**7**
	b)	What is Hop field network. Explain it in detail.	**6**
9.	a)	Explain ANFIS Architecture as universal approximator.	**7**
	b)	Explain K-means clustering.	**7**

OR

10.	a)	Explain Fuzzy c-mean clustering in detail.	**6**
	b)	Explain ANFIS Architecture in detail.	**8**
11.		Explain Rule Base Organization & focus set based Rule combination in detail.	**13**

OR

12.	a)	Explain "Input space partitioning"?	**6**
	b)	Explain the term "Input selection".	**7**

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The best time to plant a tree was 20 years ago. The second best time is now.

~ Chinese Proverb