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Question Paper Code: 56T04

Ph.D. COURSE WORK EXAMINATION, APRIL 2019

Elective

Course Work

15PPE604 - SOFT COMPUTING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) (i) Draw and describe the different activation functions used in ANN. CO1- U (15)
(ii) Draw the basic model of a MADALINE network. CO1- U (5)

Or

(b) (i) Explain with a neat diagram the neural network architecture of multilayer feed forward Network. CO1- U (10)
(ii) Explain the working of back propagation neural network with neat architecture and flowchart. CO1- U (10)
2. (a) (i) What is ART? Explain Rules and applications. CO2- U (10)
(ii) Explain counter propagation network CO2- U (10)

Or

(b) (i) Explain the working of Associative memory. CO2- U (10)
(ii) Give difference between BAM and HAM CO2- U (10)
3. (a) Explain the different types of membership function used in fuzzification process. CO3- U (20)

Or

(b) Describe the self-organizing Fuzzy Logic Control scheme with a suitable example CO3- U (20)

4. (a) (i) Explain compare and contrast TabuSearch and Ant Colony Search techniques. CO4- U (10)
- (ii) What are the different mutation operator in GA? CO4- U (10)
- Or
- (b) Write a detailed note on Ant colony search technique for solving an optimization problem. CO4- U (20)
5. (a) (i) Describe adaptive neuro fuzzy inference systems (ANFIS). CO5- U (10)
- (ii) Describe integration of neural networks and fuzzy systems. CO5- U (10)
- Or
- (b) Explain ANN-GA-Fuzzy synergism and its application. CO5- U (20)
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