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Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. ECE (Wireless Communication) (2018 Bach) (Sem.–2) SOFT COMPUTING TECHNIQUES Subject Code : MTWC-104-18

M.Code: 76068

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES : 1.Attempt any FIVE questions out of EIGHT questions. 2.Each question carries TWELVE marks.

Q.1	(a) Define soft computing and explain the importance of soft computing in the field o machine learning.	f [6]
	(b) List various learning schemes and explain any one of them with example.	[6]
Q.2	 (a) What is pattern classification? Explain one of the algorithms for pattern classification in detail. 	tion [6]
	(b) Draw and explain McCulloch-Pitts model of neural network with its limitations.	[6]
Q.3	(a) Differentiate perceptron and Hebbian learning algorithms with an appropriate example.	[6]
	(b) Draw and explain ADALINE network with its application?	[6]
Q.4	What is travelling sales man problem? List the possible solutions for this task and exp one of the best algorithms with suitable example in detail.	lain [12]
Q.5	(a) Draw and explain recurrent neural network with its real life application.	[6]
	(b) What is the significance of adaptive resonance theory neural network? Draw and explain ART1 neural network with suitable example.	[6]
Q.6	(a) What are the differences between derivative free and derivative based optimization algorithms?	n [6]
	(b) What is fuzzification processes? Explain one of the popular fuzzification processes detail with suitable example.	s in [6]
Q.7	(a) Discuss the importance of hybrid soft computing techniques in machine learning.	[6]
	(b) Explain GA based BPNN hybrid Softcomputing scheme with an example.	[6]
Q.8	(a) Differentiate between classical and Fuzzy sets. Explain two important operations of classical and fuzzy sets with example.	on [6]
	(b) Explain multiobjective optimization using genetic algorithm with an example.	[6]
NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.		