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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 of machine learning. [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. [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 explain one of the best algorithms with suitable example in detail. [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? [6]
(b) What is fuzzification processes? Explain one of the popular fuzzification processes in detail with suitable example. [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 on classical and fuzzy sets with example. [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.