Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(ECE) (2012 to 2017 E-III) (Sem.–7)

NEURAL NETWORKS & FUZZY LOGIC

Subject Code : BTEC-916

M.Code : 71921

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

Answer briefly :

1. Compare LMS and Perceptron Learning Laws.
2. Explain solving EXOR problem using RBF.
3. What is an expert system?
4. Differentiate between crisp and fuzzy set theory.
5. Explain Recurrent Neural Network.
6. What is inferential knowledge?
7. What are various activation functions used in ANN.
8. What is rule based learning?
9. Write various features of Kohonen's self organizing learning algorithm.
10. Define any two Fuzzy set operations with example.

SECTION-B

11. What is Hopfield net? Discuss the relation between the stable states of Hopfield net and the graded version of model.

12. Explain CMAC Networks.

13. Explain Boltzmann Machine with architecture and algorithm.

14. Differentiate between Mamdani and Sugeno Fuzzy Inference System.

15. Explain the different learning rules used in neural network.

SECTION-C

16. Explain the various Defuzzification techniques.

17. Compare Fuzzy Logic Controller with PID controller.

18. Explain FLS for Antilock Braking System.

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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.