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Total No. of Pages : 02

Total No. of Questions : 18

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

# ARTIFICIAL INTELLIGENCE TECHNIQUES & APPLICATIONS

Subject Code : BTEC-911

M.Code : 71915

Time : 3 Hrs. Max. Marks : 60

**INSTRUCTIONS 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 have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

## SECTION-A

**Answer briefly :**

1. What do you mean by the term perceptron?
2. What do you mean by AI?
3. What is an expert system?
4. Differentiate between crisp and fuzzy set theory.
5. Define Adaline and Madaline.
6. How fuzzy sets are defined in Fuzzy Logic?
7. State the Bayes' rule.
8. List the problem formulation steps in AI.
9. What do you mean by mutation?
10. Mention the criteria for the evaluation of a search strategy.



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## SECTION-B

11. Explain any two types of neural networks.

12. Differentiate between single and multi point crossover operations.

13. Explain the string coding of chromosomes.

14. Differentiate between Mamdani and Sugeno Fuzzy Inference System.

15. Explain features of Fuzzy Logic and Neural Network toolbox in MATLAB.

## SECTION-C

16. Explain the various Defuzzification methods.

17. Explain FLS for Antilock Braking System.

18. Explain GA in route planning for Travelling Sales Person.

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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.**



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