

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE) (2011 Batch E-II) (Sem.-7, 8)
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**1. Answer briefly :**

- a) What do you mean by the term perceptron?
- b) What is the significance of neural networks in the evolution of AI?
- c) What is an expert system?
- d) Differentiate between crisp and fuzzy set theory.
- e) Define Adaline and Madaline.
- f) What is Inferential Knowledge?
- g) What are the phases involved in designing a problem solving agent?
- h) What is rule based learning?
- i) Define Mutation.
- j) Define any two Fuzzy set operations with example.

SECTION-B

2. Draw and explain the Hopfield Neural network.
3. Write an algorithm for calculating min-max decisions. What is the role of alliances in multiplayer games?
4. Explain the string coding and selection methods of chromosomes.
5. Differentiate between Mamdani and Sugeno fuzzy inference system.
6. How forward chaining is different from backward chaining inference method?

SECTION-C

7. Explain the various defuzzification methods.
8. Discuss various learning methods in neural networks.
9. Write short note on :
 - a) Conditional planning
 - b) Reinforcement learning

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.