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Total No. of Printed Pages: [01]

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**M. Tech. (CSE) (Semester –1<sup>st</sup>)**  
**INTRODUCTION TO INTELLIGENT SYSTEMS**  
**SUBJECT CODE: MCSES1-112**  
**Paper ID: [23190205]**

**Time: 03 Hours**

**Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is Compulsory.
2. Attempt any THREE questions from Section B.
3. Attempt any TWO questions from Section C.

**Section – A**

**(4 marks each)**

- Q1. Explain the depth first search strategy with example.
- Q2. Give a brief introduction of fuzzy neural networks.
- Q3. What are the issues in knowledge representation?
- Q4.** What are the recent trends in fuzzy logic?

**Section –B**

**(8 marks each)**

- Q5. Describe the main features of Genetic Algorithm.
- Q6. What do you mean by knowledge based system structures with its basic components?
- Q7. What are evolutionary algorithms? Explain the steps of evolutionary algorithms.
- Q8. Explain iterative deepening search and stochastic annealing.

**Section –C**

**(10 marks each)**

- Q9. Explain in detail the heuristic search methodology with suitable examples.
- Q10. (a) Explain the ideas of black board architecture.  
(b) Explain Denpster – Shafer theory of evidential reasoning.
- Q11. Describe the following, briefly
  - a. Artificial intelligence (2.5)
  - b. Back propagation networks (2.5)
  - c. Radial basis function networks (2.5)
  - d. Recurrent networks. (2.5)