

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

MCA (Sem.-3)

ARTIFICIAL INTELLIGENCE & SOFT COMPUTING

Subject Code : PGCA1926

M.Code : 90799

Date of Examination : 16-06-2025

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 & C. have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION-B & C carrying EIGHT marks each.**
4. **Select atleast TWO questions from SECTION-B & C.**

SECTION-A

1. Write short notes on :

- a. What is Artificial Intelligence?
- b. Write the use of backward chaining.
- c. What is concept of clause in AI?
- d. Discuss Simulated Annealing.
- e. Write the use of Parsing.
- f. Write a short note on Unsupervised Learning.
- g. Differentiate between hard and soft computing.
- h. What is self organizing map?
- i. Discuss rule based system.
- j. What are operators in GA?

SECTION - B

2. Discuss the concept of 8-puzzle problem.
3. How is propositional logic used in artificial intelligence? Give example.
4. What is A* algorithm? Where it is used in AI?
5. Write the concept of grammars in Natural language processing.

SECTION - C

6. Explain some of the major areas of soft computing.
7. Discuss the use of single layer perceptrons in Neural Networks.
8. Demonstrate how a fuzzy set is described by a membership function.
9. Explain in detail about Genetic algorithms crossover and mutation.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.