

**P-887**

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## **MCS-E6**

### **Artificial Intelligence**

Master of Computer Application (MCA)

4th Semester Examination, 2023 (June)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **SECTION–A**

#### **(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. What do you understand by Artificial Intelligence? Why do we need Artificial Intelligence? Give some real world applications of AI.

2. How an algorithm's performance is evaluated? Compare different uninformed search strategies in terms of the evaluation criteria.
3. What is Reinforcement Learning? Explain (a) Passive Reinforcement Learning (b) Active Reinforcement Learning.
4. What is A\* search? Explain various stages of A\* search with an example.
5. Define Constraint Satisfaction Problem (CSP). How CSP is formulated as a search problem? Explain with an example.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. What is Strong AI, and how is it different from the Weak AI?
2. What are Bayesian networks, and why is it important in AI?
3. What is Deep Learning, and how is it used in real-world?

4. What is Markov's Decision process? Give example.
  5. Mention some important algorithm of Reinforcement Learning.
  6. What is a Heuristic function, and where is it used?
  7. What do you understand by Genetic algorithm? Where is Genetic algorithm used in real life?
  8. What is Adversarial Search? How Adversarial Search for the minimax procedure works?
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