

**A-0893**

**Total Pages : 4**

**Roll No. -----**

**MCS-E6**

**Artificial Intelligence**

**(MCA)**

**4<sup>th</sup> Semester Examination 2024(Dec.)**

**Time: 2:00 hrs**

**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 answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

**P.T.O.**

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## **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.

[2x19=38]

- Q.1. What is an expert system? What are the prominent features of an expert system and describe their features in detail?
- Q.2. Explain about A\* algorithm in detail.
- Q.3. Explain in detail about forward and backward chaining with an example.
- Q.4. Discuss in detail the process of machine learning with an example.
- Q.5. What is meant by a “Knowledge-Based System”? Describe the basic components of a knowledge based system. Also mention the various levels of knowledge representation.

**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.

[4x8=32]

- Q.1. Define AI. What is its importance in the field of computing?
- Q.2. Explain the difference between supervised learning and unsupervised learning.
- Q.3. Describe Water Jug Problem.
- Q.4. Write characteristics feature of expert system.
- Q.5. Define rule based system with example.
- Q.6. Explain the Best First and Depth First search method.

P.T.O.

Q.7. What is meant by Natural Language Processing (NLP)? Describe various components of NLP in detail.

Q.8. Differentiate between forward and backward reasoning.

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