

A-0840

Total Pages : 3

Roll No.

MCS-E6

ARTIFICIAL INTELLIGENCE

(MCA)

Examination, June 2025

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.*

Section-A

Long Answer Type Questions 2×19=38

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.

1. Define expert system ? Explain the features of an expert system in detail ?
2. Explain the following terms :
 - (i) A* algorithm.
 - (ii) AO* Search
3. What is Heuristic Function and Hill Climbing Search ? Explain in detail.
4. What is meant by Natural Language Processing (NLP) ? Describe various components of NLP in detail.
5. What is meant by a “knowledge representation” ? What are the desirable properties of knowledge representation ? Also mention the various levels of knowledge representation.

Section–B

Short Answer Type Questions 4×8=32

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.

1. Explain Alpha - Beta Pruning.
2. Define AI. What is its importance in the field of computing ?

3. What is supervised learning and unsupervised learning ?
Explain.
4. What is Machine Learning (ML), and how is related to
Artificial Intelligence (AI) ?
5. What is state space ? Describe with example.
6. Define rule based system with example.
7. Explain the following terms :
 - (i) Best First and Depth First search method.
 - (ii) Knowledge Agent
8. Explain in detail about forward and backward chaining
with an example.
