Roll No. .....

MCA/D09

Artificial Intelligence

Paper: MCA-502 5437

Time: Three Hours] [Maximum Marks: 50

Note:- Question No.**1** is compulsory. In addition to this attempt **FOUR** questions by selecting **ONE** question from each unit.

UNIT-I

1. Write short notes on the following:-

   (a) Turing Test

   (b) Conceptual Graph

   (c) Skolem Normal Form.

2. What is resolution? Show why the basic axiom of resolution, viz., ((a U b) & (~b U c)) → (b U c) involves implication, i.e., show that it is not equality: (a U b) & (b U c»)= (b U c).

3. Differentiate between the following:

   (a) Set of support and linear input form resolution strategies
   (b) Declarative frames and procedural frames.

UNIT-II

4. What do you understand by a production system? What are the components of it? Discuss the different conflict resolution strategies used in production system.
5. What do you understand by heuristic function? Discuss the consequences of using overestimating and underestimating heuristics in A algorithm.
6. What do you understand by mini-max search? Discuss the use of alpha and beta pruning in improving the mini-max search. Use suitable example.

UNIT-III

7. Write a detailed note on Stanford Certainty factor algebra.

8. What do you understand by knowledge engineering? What are the problems faced in knowledge acquisition? Discuss the different knowledge acquisition techniques.
9. What can be the different approaches to expert system development? Discuss in detail the prototyping model to develop expert system.
10. What is the difference between selective, constructive, and expedient induction? Give examples of each.