Roll No. : .....

Total No. of Questions : **11**] [Total No. of Printed Pages : **3**

BFMS–450

M.Sc. (Final) Examination, 2023

COMPUTER SCIENCE

Paper – MCS–205 (B)

(Artificial Intelligence)

*Time : **3** Hours*] [*Maximum Marks : **50***

Section–A **(Marks : 2 × 10 = 20)**

Note :– Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section–B **(Marks : 3 × 5 = 15)**

Note :– Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **3** marks.

Section–C **(Marks : 5 × 3 = 15)**

Note :– Answer any *three* questions out of five (Answer limit **500** words). Each question carries **5** marks.

Section–A

1. (i) Define AI.

(ii) What are the major areas of AI ?

(iii) Differentiate between informed and uninformed search.

(iv) What is the difference between DFS and Depth Limited search ?

(v) What are the types of knowledge in AI ?

(vi) Name some techniques for knowledge representation.

(vii) In which situations we require probabilistic reasoning ?

(viii) What is fuzzy logic ?

(ix) What is Parsing in NLP ?

(x) What is Perception ?

Section–B

2. Discuss the structure of intelligent agents.

Or

How human intelligence is implemented by a machine ?

3. Explain A* algorithm. What is the difference between Greedy BFS and A* search ?

Or

Define brute force. With the help of suitable example explain BFS.

4. Explain forward chaining with an example.

Or

Explain semantic networks.

5. Discuss Dempster-Shafer theory.

Or

What is Learning ? Discuss decision trees.

6. Explain reinforcement learning.

Or

What is an Expert System ? Discuss its components.

Section–C

7. Discuss water jug problem as a state space search.

8. Describe AO* algorithm. How is it different from A* algorithm ?

9. Differentiate between procedural and predicate logic. Explain resolution with suitable example.

10. Define CF model. How Baysian Network overcome the limitations of CF model ? Discuss Baysian Network in detail.

11. Explain NLP.