

Roll No :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

SP-705

M.Sc. (Final) Examination, 2021

COMPUTER SCIENCE

Paper - MCS-205 (B)

(Artificial Intelligence)

Time : 1½ Hours]

[Maximum Marks : 50

Section-A

(Marks : 2 × 10 = 20)

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

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

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.

(खण्ड-ब)

(अंक : 3 × 5 = 15)

नोट :- सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 3 अंक का है।

Section-C

(Marks : 5 × 3 = 15)

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

(खण्ड-स)

(अंक : 5 × 3 = 15)

नोट :- पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

BI-454

(1)

SP-705 P.T.O.

Section–A

1. (i) What is importance of Artificial Intelligence in Computer Science ?
- (ii) Define different types of intelligence.
- (iii) Explain Brute-force.
- (iv) What are Heuristic functions ?
- (v) Explain knowledge base system.
- (vi) What is semantic networks schemes ?
- (vii) Define decision tree.
- (viii) Discuss *two* certainty factors in probabilities reasoning.
- (ix) What is Expert System ? Give its *three* application areas.
- (x) What do you mean by Learning ?

Section–B

2. Give any *two* problems solved by Artificial Intelligence.

Or

Write the role of agents with its structure.

3. Explain DFS with various types of control strategies.

Or

Discuss uniform-cost search with suitable example.

4. Discuss important issues in organization and manipulation of knowledge.

Or

Explain the following with example :

- (a) Frames
- (b) Scripts

5. Explain computable functions and predicates.

Or

What is unification algorithm ? Explain with example.

6. Explain single layer perception model of neural network.

Or

How “Learning by taking advice” is different from “Learning by example” ?
Explain it with example.

Section–C

7. What is Artificial Intelligence ? Explain how an AI system is different from a conventional computer system.
8. Write AO* algorithm. How is it used for problem reduction ?
9. What are the limitations of predicate logic as a tool for knowledge representation ?
Explain through examples.
10. Discuss Bayes’ theorem and prove how fuzzy logic is different from binary logic.
11. What are the steps in Natural Language Processing ? List and explain them briefly.