

Roll No. :

Total No. of Questions : 21]

[Total No. of Printed Pages : 3

BPF-2227

M.Sc. (Final) Examination, 2022

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 any *five* questions out of six 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. What are the types of Artificial Intelligence ?
2. What are the different types of Machine Learning ?
3. When do we use local search algorithms in AI ?
4. Define Frames in AI.

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5. Discuss two certainty factors in probabilities reasoning.
6. Give some real world applications of AI.
7. What are the properties of search algorithms ?
8. What do you mean by probabilistic reasoning ? (Only Definition).
9. Define Neural Networks.
10. What is Learning ?

Section-B

11. Differentiate between human and machine intelligence.

Or

Define the structure of Agents.

12. What is the difference between weak AI and strong AI ?

Or

Differentiate between bidirectional search and breadth first search.

13. State the difference between procedure and declarative knowledge.

Or

Differentiate between backward and forward chaining with example.

14. What is the difference between Machine Learning and AI ?

Or

Explain computable functions and predicates.

15. What is Natural Language Processing ?

Or

What is unification algorithm ? Explain with example.

16. Explain DFS with various types of control strategies.

Or

Discuss important issues in organization manipulation of knowledge.

Section–C

17. Define History, Agent and Environment of AI. Define its importance in computer science.
18. Explain searching and its type in detail.
19. Explain expert system and its type. What are the main modal of pattern recognition ?
20. Discuss Bayes' theorem and prove how Fuzzy logic is different from binary logic ?
21. What are the limitations of predicate logic as a tool for Knowledge Representation ? Explain through examples.