



QP CODE: 26802595



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Reg No :

Name :

IMCA DEGREE EXAMINATION JUNE 2026
Eight Semester
INTEGRATED MCA
CORE - IMCA8C02 - ARTIFICIAL INTELLIGENCE

2020 Admission Onwards

C6686D6A

Time: 3 Hours

Maximum: 75 Marks

Part A

*Answer any **ten** questions*

*Each question carries **3** marks*

1. Comment on the given statement "Is a good solution absolute or relative?".
2. Briefly state how Decision Tree helps in organizing data.
3. How are the machines Integrating facts or Knowledge in Memory?
4. Explain Fuzzy Matching with an example.
5. How can we represent the Search Space through Directed Graph or Tree?
6. What is non-monotonic reasoning, and how does it handle inconsistencies in logic systems?
7. Compare Monotonic and Non-Monotonic Reasoning.
8. How do messages work in an object-oriented system?
9. Provide an example of analogical problem solving.
10. What is explanation-based learning (EBL), and how does it differ from traditional learning methods?
11. Distinguish between grammars and languages.
12. Briefly explain Personal Consultant Plus.

(10×3=30 marks)





Part B

Answer *all* questions

Each question carries **9** marks

13. a) Describe AI Assumptions.

OR

- b) Construct State Representation, Initial State, Goal State and Possible Moves of the "Missionaries and Cannibals Problem". Three missionaries and three cannibals are on the left bank of a river. They need to cross the river using a boat that can carry at most two people at a time. The challenge is to ensure that at no point in time do the cannibals outnumber the missionaries on either bank of the river, because if that happens, the cannibals will eat the missionaries. i.e., (Count of M $\geq$ Count of C)
14. a) Explain the RETE algorithm and its significance in rule-based systems. How does it optimize the matching of rules?

OR

- b) What is AO* searching technique and how does it work? Discuss its fundamental principles.
15. a) Explain the process of converting logical statements into clausal form. Why is this conversion important for automated reasoning systems?

OR

- b) Compare deductive and non-deductive inference methods in formal logic. In what situations is non-deductive reasoning preferred?
16. a) Describe performance measures for learning models.

OR

- b) Define intelligent editors and explain their role in enhancing programming and writing tasks.
17. a) Discuss why NLP is essential for AI based applications.

OR

- b) Discuss the knowledge system building tools.

(5×9=45 marks)

