

3C3003

Roll No. 22C41X611

Total No. of Pages: 2

3C3003

MCA III - Sem. (Main / Back) Exam., - 2024
MCA - 303 (N) Artificial Intelligence

Time: 3 Hours

Maximum Marks: 70
Min. Passing Marks: 28

Instructions to Candidates:

Attempt all ten questions from Part A. All five questions from Part B and three questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)*

1. NIL

2. NIL

PART - A

[10×2=20]

(Answer should be given up to 25 words only)

All questions are compulsory

Q.1 What is Artificial Intelligence?

Q.2 Define an agent.

Q.3 How will you measure the problem-solving performance?

Q.4 What is the application of BFS?

Q.5 What are the advantages of heuristic function?

Q.6 How can we avoid ridge and plateau in hill climbing?

Page 1 of 2

[3C3003]



- ~~Q.7~~ What is Expert System Shell?
~~Q.8~~ What is Constraint Satisfaction Problem?
~~Q.9~~ Define Tokenization.
~~Q.10~~ What is Script?

PART – B

[5×4=20]

(Analytical/Problem solving questions)

Attempt all five questions

- ~~Q.1~~ Explain the A* search and give the proof of optimality of A*.
~~Q.2~~ Write and explain the characteristics of AI applications.
~~Q.3~~ Write short note on Branch and Bound technique.
~~Q.4~~ What is Resolution Principle and Unification? Explain.
~~Q.5~~ Explain the concept of Language Modeling in detail.

PART – C

[3×10=30]

(Descriptive/Analytical/Problem Solving/Design Questions)

Attempt any three questions

- ~~Q.1~~ Explain Depth first and Breadth first search in detail.
~~Q.2~~ Explain the Architecture of Expert Systems in detail. Also define the concept of Knowledge Acquisition.
~~Q.3~~ What is Semantics and Pragmatics? Explain Syntax-Driven Semantic analysis.
~~Q.4~~ Explain First Order Predicate Calculus along with Resolution Principle and Unification.
~~Q.5~~ Write and Explain Game Playing Min Max Search procedure with the help of appropriate example.

[3C3003]