

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

III-B.TECH-I-Semester End Examinations (Supply) - December- 2024
ARTIFICIAL INTELLIGENCE
(Common for CSE, IT)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A**(20 Marks)**

1. a) List out basic search strategies. [2M]
- b) Define Artificial Intelligence. [2M]
- c) Explain Knowledge Representation. [2M]
- d) Compare between forward chaining and Backward chaining. [2M]
- e) Explain Bayes rule. [2M]
- f) List the knowledge representation issues. [2M]
- g) Write short notes on Decision trees. [2M]
- h) Define Learning. [2M]
- i) Role of Expert Systems in present era? [2M]
- j) List out the functionalities of Shell. [2M]

PART-B**(50 Marks)**

2. List and explain the applications of Artificial Intelligence. [10M]
- OR**
3. What is A* search? Explain various stages of A* search with an example. [10M]
 4. Explain Minimax algorithm with an example. [10M]
- OR**
5. Define constraint satisfaction problem (CSP). How CSP is formulated as a search problem? Explain with an example. [10M]
 6. Discuss in detail about Knowledge Representation. [10M]
- OR**
7. How Bayesian network is used in representing the uncertainty knowledge? Explain the method of performing exact inference in Bayesian networks? [10M]
 8. Describe the role of information gain in decision tree learning. [10M]
- OR**
9. Describe and discuss in detail, the important aspects of (i) Rote Learning (ii) Learning by taking advice. Illustrate answer with the help of relevant examples. [10M]
 10. Discuss in detail about supervised learning. [10M]
- OR**
11. With the help of a neat diagram, explain the Expert System Architecture. [10M]
