

Code No.: CS502PC

R20

H.T.No.

		8	R						
--	--	---	---	--	--	--	--	--	--

**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**III-B.TECH-I-Semester End Examinations (Regular) - January- 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) Explain A\* Algorithm. [2M]
- b) Define Artificial intelligence. [2M]
- c) What is game tree? [2M]
- d) List out the types of Searching Methods. [2M]
- e) What is Expert system? [2M]
- f) Write the application of Artificial intelligence. [2M]
- g) Define Learning. [2M]
- h) Explain about knowledge representation. [2M]
- i) Explain the role of domain expert? [2M]
- j) Define the knowledge acquisition process. [2M]

**PART-B**

**(50 Marks)**

2. Discuss the following search technique with the help of an example .Also discuss the benefits and short coming of each. [10M]
  - i. BreadthFirstSearch.
  - ii. DepthFirstSearch.
3. Explain the A\* search and give the proof of optimality of A\*. [10M]
4. Describe how Alpha-Beta search works with relevant examples. [10M]
5. Explain about different types of Agents. [10M]
6. Write a property and approaches of a knowledge representation scheme. [10M]
7. Describe Bayesian networks. How is the Bayesian networks powerful representation for uncertainty knowledge? [10M]
8. Explain about Winstons Learning Program? [10M]
9. What is Inductive Learning? What is the importance of inductive bias? Describe the framework of inductive learning. [10M]
10. Define List of expert shells and explain its tools. [10M]
11. Differentiate between Expert systems Vs Traditional Systems. [10M]

\*\*\*\*\*