Code No.: CS502PC	R20	H.T.No.			8	R						

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Supply) - June- 2025
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)	What are the different types of agents?	[2M]
	b)	What are the advantages of Depth First Search?	[2M]
	c)	How Knowledge is represented?	[2M]
	d)	What is Mini –Max Strategy?	[2M]
	e)	What is Propositional logic?	[2M]
	f)	What are the techniques to represent knowledge?	[2M]
	g)	Explain Supervised Learning?	[2M]
	h)	How will you measure the problem-solving performance?	[2M]
	i)	Name some early Expert Systems?	[2M]
	j)	Explain the role of Domain Expert?	[2M]

PART-B **(50 Marks)**

2.	a)	Discuss any two from the following heuristic search techniques.	[5M]
	b)	Explain the algorithm with the help of an example i) Hill Climbing ii) Best-First Search iii) A* Algorithm iv) Beam Search	[5M]

OR

3.	How to define a problem as state space search? Discuss it with the help of an example.	[10M]
4.	Discuss any 2 uninformed search methods with examples. Breadth First Search (BFS)	[10M]

OR

5.	Explain A* algorithm with a suitable example. State the limitations in the algorithm?	[10M]
6.	Define uncertain knowledge, prior probability and conditional probability .State the Baye's theorem.	[10M]

OR

7.	Briefly explain the method of performing exact inference in Bayesian networks.	[10M]
8.	Explain about Learning in Problem Solving.	[10M]

OR

9.	Explain about Winstons Learning Program?	[10M]
10.	Explain the basic components and applications of Expert System.	[10M]

OR

11.	Explain in detail about the Expert System Shell.	[10M]

****