

Total No of Questions: [12]

SEAT NO. : 7

[Total No. of Pages : 2]

B.E. 2008 (Computer Engineering)

Artificial Intelligence

(Elective - I) (Semester - I)

Time: 3 Hours

Max. Marks : 100

Instructions to the candidates:

- 1) Answers to the two sections should be written in separate answer books.
- 2) Answer any three questions from each section.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Figures to the right side indicate full marks.
- 5) Use of Calculator is allowed.
- 6) Assume Suitable data if necessary

SECTION I

Q1)	a)	Identify and describe various components of an Intelligent Agent program.	[10]
	b)	Explain the use of AI in Robotics elaborately.	[8]

OR

Q2)	a)	Tabulate and explain Simple Agent Function for the vacuum cleaner world.	[10]
	b)	Write a note on use of AI in Linguistics.	[8]

Q3)	a)	Write an algorithm for Simulated Annealing. Explain in detail.	[8]
	b)	Do you think that A* generates optimal search solution. Justify with example.	[8]

OR

Q4)	a)	Compare A* and AO* algorithms.	[8]
	b)	What are the drawbacks of Hill Climbing? Explain with examples.	[8]

Q5)	a)	What is alpha-beta pruning? Explain with proper example.	[10]
	b)	Comment on efficiency of Mini-Max search.	[6]

OR

Q6)	a)	Solve the following Crypt-Arithmetic problem using constraint satisfaction method, LOGIC + LOGIC = PROLOG you can assign unique single digit number from 0 to 9 to an alphabet.	[10]
	b)	Write the steps in Mini-Max algorithm	[6]

SECTION II

Q7)	a)	What is Propositional Logic? What are the advantages and disadvantages of representation using Propositional Logic? Explain with examples.	[10]
	b)	What is Unification Algorithm? What is the use of it ?	[8]

OR

Q8)	a)	What are the difficulties in using Resolution? Explain with appropriate examples.	[10]
	b)	Explain any one Classical Planning approach in detail.	[8]

Q9)	a)	How can Decision Tree be used in AI? Elaborate.	[8]
	b)	Give any one approach used in Uncertain Reasoning.	[8]

OR

Q10)	a)	Write a detail note on Bayes Network.	[10]
	b)	What is Supervised learning?	[6]
Q11)	a)	Define Expert System and formulate an Expert System for Chemical Analysis hypothetically.	[10]
	b)	What is the role of Pragmatic Analysis in NLP?	[6]
OR			
Q12)	a)	Draw an architecture of a typical Expert System. Explain each block in detail.	[10]
	b)	Write a note on Semantic Parsing in NLP.	[6]