Total No. of Questions : 12]

SEAT No. :

P1995

[Total No. of Pages : 2

[5254] - 166
B.E. (Computer Engineering)
ARTIFICIAL INTELLIGENCE
(2008 Pattern) (Elective - I)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates :

1) ***Assume suitable data wherever necessary.***
2) ***Separate answer books must be used for the sections.***
3) ***Draw proper diagrams wherever necessary.***

SECTION - I

Q1) a) Define Artificial Intelligence and agent. Explain where Al is impossible and why? **[8]**

b) Write Hill Climbing Algorithm? Explain in detail the problems of Local Maxima, Plateau and Ridge in hill climbing and solution to this. **[10]**

OR

Q2) a) Suppose you design a machine to pass the Turing test. What are the capabilities such a machine must have? Explain each in detail. **[8]**

b) Write Uniform cost search algorithm and explain in detail with example. **[10]**

Q3) a) Write A* Algorithm and explain in detail with example. **[8]**

b) Explain Minimax Search Algorithm for two players with example. **[8]**

OR

Q4) a) Solve given Crypt arithmetic problem using Constraint Satisfaction

TWO + TWO = FOUR **[8]**

b) How can we add alpha and beta cut-offs for better performance? **[8]**

P.T.O.

Q5) a) Explain Cutting off search and Search versus lookup. **[10]**

b) Explain alpha-beta cut-offs as applicable to the basic minimax algorithm. **[8]**

OR

Q6) a) Explain Alfa-beta pruning in CSP and Move ordering. **[10]**

b) Explain Simulated annealing with example. **[8]**

SECTION - II

Q7) a) Explain classical planning and Non-Linear planning with example. **[8]**

b) What are the various components of a typical planning system? **[8]**

OR

Q8) a) Explain the following terms as applicable to knowledge Representation. **[16]**

i) Semantic - net

ii) Script

iii) Frames

iv) Conceptual Dependency

Q9) a) Explain Bayes' Rule and its uses. **[8]**

b) Explain Rule based methods for uncertain reasoning. **[8]**

OR

Q10)a) What is 'learning by Parameter' adjustment? Explain with example. **[8]**

b) Explain Fuzzy sets and Fuzzy logic in detail. **[8]**

Q11)a) Draw and explain the Architecture of Ideal Expert System. **[8]**

b) Why does PROLOG qualify to be an AI language? Discuss. **[8]**

OR

Q12)a) Explain with suitable examples the application of neural network in Artificial Intelligence. **[8]**

b) Explain Discourse and pragmatic processing. **[8]**

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