Total No. of Questions : 12]

SEAT No. :

P1453

[Total No. of Pages : 3

[4759]-210

B.E. (Computer Engineering)

ARTIFICIAL INTELLIGENCE

(2008 Course) (Semester - I) (Elective -I) (410444)

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

Instructions to the candidates:

1) ***Attempt three questions from section I and three questions from section II.***
2) ***Answers to the two sections must be written in separate books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***
5) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) Explain the Artificial Intelligence applications. **[8]**

b) Define the following terms with example. **[8]**

i) State

ii) Search tree

iii) Successor function

iv) Branching factor

OR

Q2) a) What are Intelligent Agents? Explain the architecture of a typical agent. **[8]**

b) Compare different uniformed searching strategies. **[8]**

P.T.O.

Q3) a) Explain hill climbing algorithm. Explain plateau, ridge, local maxima and global maxima. **[8]**

b) Explain A* algorithm with its pseudo - code. **[8]**

OR

Q4) a) Explain alpha beta cut off with an example-show a game tree to explain. **[8]**

b) Define the term Heuristic fun? Explain its significance in informed search with example. **[8]**

Q5) a) Explain MINI-MAX search algorithm with example. **[10]**

b) Elaborate various approaches for solving constraint satisfaction problems. **[8]**

OR

Q6) a) Solve SEND + MORE = MONEY as a constraint satisfaction problem. **[10]**

b) Elaborate on limitations of MINI-MAX search algorithm. What are the ways to overcome it. **[8]**

SECTION - II

Q7) a) What is the significance of planning? Which are the various components of typical planning system. **[8]**

b) State the rules and steps for converting a given well predicate logic statement to clausal form. **[8]**

OR

Q8) a) Explain Bayes rule with examples. **[8]**

b) What is a fuzzy set. Explain fuzzy logic concept with example. **[8]**

Q9) a) Explain unification algorithm with example. **[8]**

b) Elaborate on various forms of learning. **[8]**

OR

Q10)a) Write a note on learning by deduction and learning by Induction. **[8]**

b) Explain decision tree algorithm with suitable example. **[8]**

Q11)a) Write a case study of expert system for medical diagonosis. **[10]**

b) Explain concept of syntactic analysis with suitable example. **[8]**

OR

Q12)a) Elaborate the issues involved in natural language processing? Explain the steps involved in this process. **[10]**

b) Explain the significance of morphological analysis and pragmatic analysis in NLP with suitable example. **[8]**

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