Total No. of Questions :12]

SEAT No. :

P3387

[Total No. of Pages : 3

[4959]-129
B.E. (Electronics)
c-ARTIFICIAL INTELLEGENCE
(2008 Pattern) (Elective - IV) (404210)

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

Instructions to the candidates:

1) ***Answer any 3 questions from each section.***
2) ***Answers to the two sections should be written in separate book.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***
5) ***Use of logarithmic tables, slide rule, mollier charts, electronic pocket calculator and steam tables is allowed.***
6) ***Assume suitable data, if necessary.***

SECTION-I

Q1) a) What is Agent? Explain structure of an agent. **[8]**

b) Explain detail characteristics of problem. What are different functionalities of an agent? **[8]**

OR

Q2) a) Use toy problem to illustrate various problem solving methods. **[8]**

b) List the characteristics of intelligent agents. **[8]**

Q3) a) Compare depth first search (DFS) and breadth first search (BFS). **[8]**

b) What do you mean by environment? Enlist the types of environment. **[8]**

OR

Q4) a) Apply the constraint satisfaction to solve following crypt arithmetic problem to assign single digit number from 0 to 9 each alphabet SEND + MORE = MONEY. **[8]**

b) Explain Hill Climbing algorithm with pseudo code. **[8]**

P.T.O.

Q5) a) Consider the following sentences & translates the sentences into formulas in predicate logic & clause form. **[10]**

i) John likes all kind of food.

ii) Chicken is food.

iii) Apples are food.

iv) Anything any one eats & isn't killed by is food.

v) Bill eats peanuts and is still alive.

vi) Sue eats anything Bill eats.

b) Explain resolution process in predicate logic. **[8]**

OR

Q6) a) Write short note on conceptual dependancy and frames. **[8]**

b) What do you mean by semantic network and explain with suitable example. **[10]**

SECTION-II

Q7) a) Explain forms and types of learning. **[8]**

b) Explain Rote learning and learning by Anology. **[8]**

OR

Q8) a) Explain non linear planning with example. **[8]**

b) Write note on Learning methods and TWEAK algorithm. **[8]**

Q9) a) Give two typical applications of Artificial Neural Network. **[8]**

b) Explain Waltz's algorithm with an example. **[8]**

OR

Q10)a) Draw the functional elements of expert system and explain functionality of each of them? **[8]**

b) Discuss in detail all the phases of Natural Language Processing. **[8]**

Q11)a) Explain in detail how does prolog qualify itself as an Artificial Intelligence Language? **[10]**

b) Draw the multilevel ANN for specifying EX-OR function of Digital gate and explain. **[8]**

OR

Q12)a) Define probabilistic language processing and explain its models. **[10]**

b) Draw and explain typical Expert system architecture. **[8]**

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