Total No. of Questions : 8]

SEAT No. :

P3839

[Total No. of Pages : 2

[5870] - 1218

T.E. (Honours) (Artificial Intelligence and Machine)

ARTIFICIAL INTELLIGENCE

(2015 Pattern) (Semester - II) (310303)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates :

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) a) Represent the following sentences into formulas in predicate logic. **[9]**

i) John likes all kinds of food.

ii) Apples are food.

iii) Chicken are food.

iv) Anything anyone eats and isn't killed by is food.

v) Bill eats peanuts and is still alive.

vi) Sue eats everything Bill eats.

b) Explain Bayesian inference using a suitable example. **[8]**

OR

Q2) a) Explain Unification algorithm with suitable example. **[9]**

b) Write a note on probability reasoning. **[8]**

Q3) a) Explain linear regression. Find linear regression equation for the following two sets of data : **[6]**

X	Y
2	3
4	7
6	5
8	10

P.T.O.

b) Explain the architecture of Artificial Neural Network. **[6]**

c) Explain how Support Vector Machines are used for classification with suitable example. **[6]**

OR

Q4) a) Explain : **[6]**

i) Supervised Learning.

ii) Unsupervised Learning.

b) Explain how Decision Trees are used in Learning? **[6]**

c) What is Artificial Neural Network? Give two applications of artificial neural networks in detail. **[6]**

Q5) a) Illustrate Mini-Max search for the tic-tac-toe game. **[9]**

b) Explain Alpha - Beta Pruning with an example. **[8]**

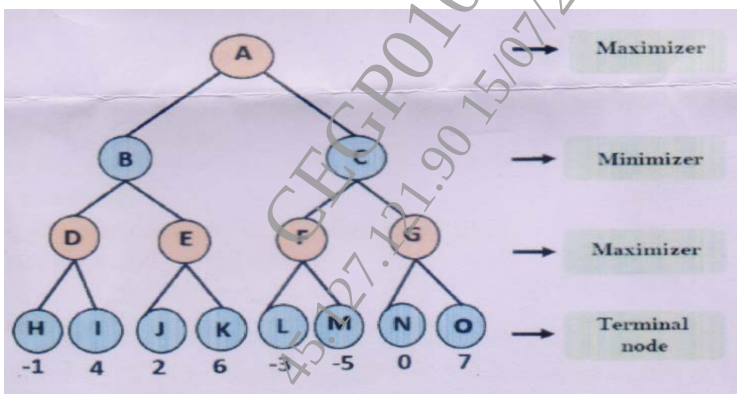
OR

Q6) a) Write a note on : **[9]**

i) State-of-the-art Game Programs.

ii) Types of Games in AI.

b) Solve the given game tree using min max algorithm. **[8]**



Q7) a) Explain general framework for computer vision applications. **[9]**

b) Explain forward chaining and backward chaining for a simple example. **[9]**

OR

Q8) a) Explain how sentiment analysis using Natural Language Processing techniques. **[9]**

b) What is NLP? Explain all five phases of NLP. **[9]**