Total No. of Questions : 8]

SEAT No. : ____

P-7777

[Total No. of Pages : 2

[6189]-325
T.E. Honors (Computer Engineering)
ARTIFICIAL INTELLIGENCE
(2019 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) Explain various operators used in propositional logic for knowledge base building. **[9]**

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

OR

Q2) a) What is knowledge representation in propositional logic. Compare propositional logic and predicate logic. **[9]**

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

Q3) a) Explain **[6]**

i) Supervised learning.

ii) Unsupervised Learning.

b) 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

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

OR

P.T.O.

Q4) a) With the help of an architecture diagram explain multilayer feed forward artificial neural network. **[6]**

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]**

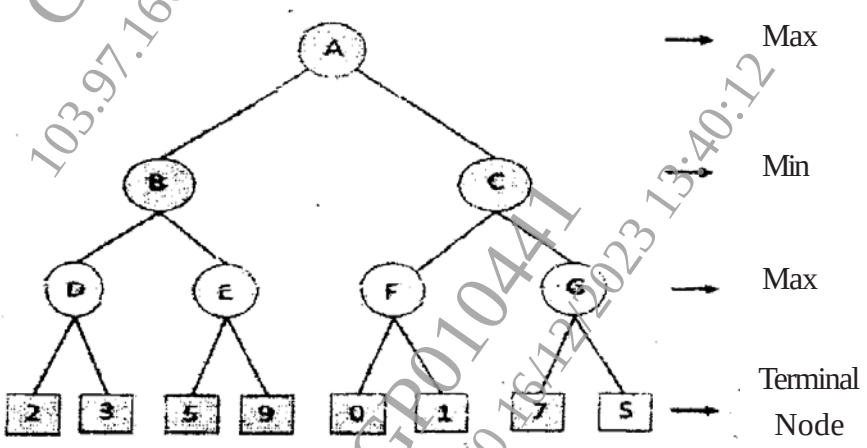
b) Write a note on : **[8]**

i) Types of Games in AI

ii) State-of-the-art Game Programs

OR

Q6) a) Solve given two player search tree using Alpha-beta pruning. **[9]**



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

Q7) a) Explain how sentiment analysis is done using Natural Language Processing techniques. **[9]**

b) Represent the architecture of an expert system. label the various components in the diagram and explain. **[9]**

OR

Q8) a) Explain forward chaining and backward chaining for a simple example. **[9]**

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

❍❍❍❍