Total No. of Questions : 10]

SEAT No. :

P3849

[Total No. of Pages : 2

[5561]-277
B.E. (Computer Engineering)
SMART SYSTEM DESIGN AND APPLICATIONS
(2012 Pattern) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right indicate full marks.***
3) ***Assume suitable data if necessary.***

Q1) a) What are various agent environments? Give PEAS representation for an agent. **[8]**

b) Explain game theory and knowledge structure. **[6]**

c) Explain the hardware requirements for robotics ? **[4]**

OR

Q2) a) Define problem formulation? Describe the components of problem with suitable example. **[8]**

b) Explain rote learning with example. **[6]**

c) Write short notes on Kalman Filters. **[4]**

Q3) a) Explain support Vector Machine with issues and applications. **[4]**

b) Compare and contrast propositional logic and FOL. **[6]**

c) What is Expert System? List out application of expert system? **[4]**

OR

Q4) a) Explain Role of NLP in Al. **[4]**

b) What is baye's rule? State its application. **[6]**

c) What is propositional logic? Explain with example. **[4]**

Q5) a) What is prior probability and posterior probability? Explain with suitable example. **[6]**

b) Explain iterative deepening depth search algorithm with its function. **[8]**

OR

P.T.O.

Q6) a) What are the basic axioms of probability? Explain how to derive the useful facts from the basics axioms with suitable example. **[8]**

b) How to represent and evaluate decision problem with a decision network. **[6]**

Q7) a) What is supervised learning? Explain any one. **[6]**

b) Write a note on Robotics software architecture. **[6]**

OR

Q8) a) Explain in brief language models with suitable examples. **[6]**

b) Explain and draw a decision tree for deciding whether to wait for a table if a restaurant currently has no free tables. **[6]**

Q9) a) Explain in details the components that help in reconstructing the world in 3D. **[6]**

b) Enumerate and explain the different edge profiles using in edge detection. **[6]**

OR

Q10)a) What are the basic inference task that must be solved in a generic temporal model. **[6]**

b) List application domains of robotics. Explain any one in detail. **[6]**