Total No. of Questions : 10]

SEAT No. : ____

P4254

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[5354] - 673
B.E. (Computer Engineering)
SMART SYSTEM DESIGN & 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) Explain the various Al problems and Al techniques. **[8]**

b) What are various agent environments? Give PEAS representation for an agent. **[6]**

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

OR

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

b) Explain the hardware requirements for robotics? **[6]**

c) Explain rote learning with example. **[4]**

Q3) a) What is propositional logic? Explain with example. **[4]**

b) Explain A Star search algorithm using an example. **[6]**

c) Write short note on structure of intelligent agents. **[4]**

OR

Q4) a) Explain types of decision trees in data mining. **[4]**

b) What is Expert System? List out application of expert system? **[6]**

c) What is reasoning? What is its role in artifical intelligence. **[4]**

P.T.O.

Q5) a) Explain iterative deepening depth search algorithm with its function. **[6]**

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

i) Inductive learning

ii) Learning Decision Tree.

OR

Q6) a) What is problem? What are the basic elements needed for solving single state problem and formalize the 8- Puzzle problem? **[8]**

b) Explain machine learning types. **[6]**

Q7) a) Define supervised learning? Explain and draw a decision tree for deciding whether to wait for a table if a restaurant currently has no free tables. **[6]**

b) Explain the steps to assess the performance of the learning algorithm with an example. **[6]**

OR

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

b) Write a note on Bayesian Network. **[6]**

Q9) a) What are the basic inference task that must be solved in a generic temporal model. **[6]**

b) Write a short note on planning with operator. **[6]**

OR

Q10)a) Enumerate and explain the different. Edge profile using in edge detection. **[6]**

b) Write short note on biological neural network. **[6]**