

Registration No. :

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Total number of printed pages – 2

B. Tech
PECS 3301

Sixth Semester (Special) Examination – 2013

ARTIFICIAL INTELLIGENCE

BRANCH : CSE, IT

QUESTION CODE : E 379

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any **five** from the rest.*

The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10
- (a) What are the branches of AI ?
 - (b) What do you mean by inference mechanism ?
 - (c) How agents are classified in order to increase generality ?
 - (d) Differentiate between search space and state space.
 - (e) What is knowledge engineering ?
 - (f) Distinguish between procedural knowledge and declarative knowledge.
 - (g) What is environment ? List two properties of environment.
 - (h) Classify between neural network and belief network.
 - (i) What is perceptron ?
 - (j) What is relaxed problem ? Explain with example.
2. (a) Invent heuristic function for 8 queen problem that sometimes over estimate and show how it can lead to suboptimal solution in a particular problem. 5
- (b) What is the requirement for intelligent agents ? 5



P.T.O.

3. (a) What are the steps for planning problems using state space search methodology ? 5
- (b) List out the conditions that are to be met to apply forward chaining. 5
4. Compare and contrast each of the techniques, providing examples of each strategy : decision tree, neural network, belief network. 10
5. (a) What is Constraint Satisfaction Problem (CSP) ? Suggest one method to find solution for CSP. 5
- (b) What is knowledge based agent ? How are they related to Wumpus world ? 5
6. (a) What is partial order planner ? State the characteristics of planner. Suggest an example of partial order planner. 5
- (b) What is rational agent ? Discuss the key characteristics of it. 5
7. (a) What are the various domains of AI ? What is an AI technique ? 5
- (b) What is knowledge base ? Describe different knowledge acquisition process. 5
8. Write short notes on : 5x2
- (a) Hill climbing
- (b) Goal Stack Planning.

