Code :R5321506

R5

III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011
ARTIFICIAL INTELLIGENCE
(Computer Science & Systems Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1. (a) Write about gestation of artificial intelligence.
   (b) Write about the birth of artificial intelligence.

2. What is a heuristic search? Explain various types of heuristic searches.

3. Explain why it is a good heuristic to choose the variable that is most constrained, but the value that is least constraining in a CSP search.

4. Why Alpha-Beta cutoffs are added to minimax procedure? Explain clearly with example and diagram.

5. (a) Explain in detail a knowledge-based agent.
   (b) Discuss on complexity of propositional inference.

6. Explain forward and backward chaining algorithms.

7. Let us consider a version of the milk/banana/drill shopping problem

   (a) Let CC denote a credit card that the agent can use to buy any object. Write the description of Buy so that the agent has to have its credit card in order to buy any thing.
   (b) Write a Pick-Up operator that enables the agent to have an object if it is portable and at the same location as the agent.
   (c) Assume that the credit card is at home, but Have(CC) is initially false. Construct a partially ordered plan that achieves the goal, showing both ordering constraints and causal links
   (d) Explain in detail what happens during the planning process when the agent explores a partial plan in which it leaves home without the card.

8. (a) Explain supervised learning, reinforcement learning, and unsupervised learning.
   (b) Comment on the expressiveness of decision trees.
   (c) What do you mean by incremental learning.

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