Roll No. _____   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CSE) (2011 Onwards) (Sem.–7,8)
# ARTIFICIAL INTELLIGENCE
Subject Code : BTCS-701

Paper ID : [A2985]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

   1) Define variable binding.

   2) What is Conflict Resolution Strategies?

   3) What is an inference engine?

   4) What is a Rule based programming?

   5) What is a monotonic Production System?

   6) What is learning by induction?

   7) What is declarative knowledge?

   8) What is probabilistic reasoning?

   9) What is a search path?

   10) What is perception?

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SECTION-B

2. Differentiate between Data, Belief and Hypothesis & Knowledge.

3. Express the following sentences as conceptual dependency structure

   a) Bill is a programmer.

   b) Sam gave Mary a box of candy.

4. Determine whether the following is Satisfiable, Contradictory or Valid :

   $(P \wedge Q) \vee \rceil (P \wedge Q)$

5. Explain state space approach in solving any AI problem. Discuss this for water jug problem.

6. How AI handles reasoning under uncertainty? Explain with example

SECTION-C

7. What important characteristics should a computer memory organization system should possess?

8. Discuss the steps needed to convert a wff in predicate logic into clause form.

9. Explain the back propagation algorithm for neural nets.