III B.Tech. II Semester Regular & Supplementary Examinations

Set-4

April/May - 2013

ARTIFICIAL INTELLIGENCE

(Computer Sciences & Engineering)

Time: 3 Hours   Max. Marks: 70

*Answer any **FIVE** Questions*

*All Questions carry **Equal** Marks*

- - -

1. (a) What is a heuristic? Discuss heuristic search.

   (b) Discuss some of the problems contained within AI.

2. Explain depth first search strategy. List the limitations of it. Discuss how depth-limited search overcomes any of these limitations.

3. (a) Define unit clause, horn clause.

   (b) Discuss the standard logical equivalences.

4. (a) Discuss composition of substitutions with lucid examples.

   (b) What is a choice point? How to implement them? Explain.

5. What do you mean by stable model semantics? Explain in brief.

6. (a) Explain the nature of uncertain knowledge with examples.

   (b) Prove that the disjunction of all possible atomic events is logically equivalent to true use proof by induction on the number of random variables.

7. Explain the following,

   (a) Supervised learning

   (b) Unsupervised learning

   (c) Reinforcement learning.

8. Explain fuzzification and defuzzification of fuzzy logic based system.