Code: IT7T4B

IV B.Tech - I Semester – Regular Examinations – November 2015

ARTIFICIAL INTELLIGENCE
(INFORMATION TECHNOLOGY)

Duration: 3 hours   Max. Marks: 70

Answer any FIVE questions.   All questions carry equal marks

1. a) Explain the characteristics of an AI technique.   7 M

   b) With suitable example explain the characteristics of monotonic and partially commutative production systems.
                                                                                       7 M

2. a) Explain the role of state space approach in solving AI problem.   7 M

   b) Explain the role of different tables in Means – Ends analysis.   7 M

3. a) Prove each of the following statements: 7 M
      i) Breadth first search is a special case of uniform cost search.
      ii) Breadth first, depth first and uniform cost search are special cases of best first search.
      iii) Uniform cost search is a special case of A* search.

b) Explain Resolution with an example. 7 M

4. a) With suitable examples, explain the steps needed to convert a WFF in predicate logic to its equivalent clause form. 7 M

b) Explain the operation of unification algorithm. 7 M

5. Discuss different models for non-monotonic reasoning. 14 M

6. a) Discuss the use of Frames for default reasoning. 8 M

b) Write a short note on Scripts. 6 M

7. Explain mini-max search procedure by adding alpha-beta cut offs. 14 M

8. a) What is expert System? Explain its various parts. 7 M

b) Explain robot architecture. 7 M