FACULTY OF ENGINEERING

B.E. 4/4 (CSE) I – Semester (Suppl) Examination, May 2013

Subject : Artificial Intelligence

Time : 3 hours   Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. What are the limitations of an expert system?   3

2. What are frames used to represent knowledge?   2

3. Distinguish between un-informed search and hernistic search.   3

4. Define situation calculus.   3

5. What is an artificial neuron?   2

6. Explain Sussman anomaly in planning.   3

7. Explain what is common sense knowledge? What are the difficulties in representing
    common sense knowledge?   3

8. What is a fluent in situation calculus?   2

9. What is acoustic model?   2

10. What is resolution refutation procedure?   2

PART – B (50 Marks)

11.a) Write A* algorithm and explain with an example.   6
   b) Write state space solution for water Jug problem.   4

12.a) Explain partial order planning with an example.
   b) Define a Bayes network and explain the three important patterns of inference in
      Bayes network.

13.a) Explain MIN-MAX algorithm with an suitable example.
   b) What is an activation function? Explain.

14.a) Describe unification algorithm with an example.
   b) Discuss the architecture of expert systems.

15.a) Explain the various types of agent program with a suitable examples.
   b) Explain top-down and bottom-up parsing with an example.

16.a) Write and explain acoustic model for speech recognition with an example.
   b) What are different forms of knowledge used in natural language understanding?

17.a) What is a neural network? What are its different layers?   6
   b) What is iterative deepening?   4

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