35094

M.Sc. DEGREE EXAMINATION, OCTOBER 2015.

THIRD SEMESTER

Computer Science

Paper IV – ARTIFICIAL INTELLIGENCE

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. What is Turing test? Explain.
2. Explain Means-Ends analysis.
3. Explain the unification algorithm.
4. Differentiate procedural and declarative knowledge.
5. Explain resolution in predicate logic.
6. What is agenda-driven search?
7. What is learning?
8. What are the applications of neural networks?

PART B — (4 × 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. (a) Define AI and write a note on Task domains of AI.

   (b) Write the characteristics of a problem with examples.

Or

10. Trace the constraint satisfaction procedure solving the following cryptarithmetic problem.

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  C R O S S
  R O A D S
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  D A N G E R
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11. Write a note on issues in knowledge representation.

Or

12. Consider the following sentences

(a) John likes all kinds of food

(b) Apples are food

(c) Chicken is food

(d) Anything anyone eats and isn't killed by is food

(e) Bill eats peanuts and is still alive

(f) Sue eats everything Bill eats

(i) Translate these sentences into formulas in predicate logic

(ii) Prove that john likes peanuts using resolution

13. How can you achieve parallelism in reasoning systems?

Or

14. Discuss the following.

(a) Learning by parameter adjustment.

(b) Learning by chunking.

15. Discuss about Back propagation networks.

Or

16. (a) Write a short note on Expert systems.

(b) Explain the major problems faced by current expert systems.

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