LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **COMPUTER SCIENCE**

THIRD SEMESTER – APRIL 2018

CS 3950- ARTIFICIAL INTELLIGENCE

Date: 24-04-2018   Dept. No.   Max. : 100 Marks
Time: 09:00-12:00

SECTION -A

ANSWER ALL THE QUESTIONS: **(10X2=20)**

1. What is AI?
2. Define heuristic function
3. What is simulated annealing?.
4. What is local maxima?
5. What is ontological engineering?
6. What is predicate logic?
7. What are the assertions in First Order Logic?
8. Define inductive learning?
9. What are the context free grammars?
10. What is Chart parsing?

SECTION-B

ANSWER ALL THE QUESTIONS   **(5X8=40)**

11. a) What are the problem solving agents? Explain their characteristics.

(OR)

b) Explain water jug problem and its rules and states.

12. a) Explain AO* algorithm and its applications.

(OR)

b) Explain Crypt arithmetic problems and the approaches to solve those problems. Give an example.

13. a) What are the syntax and semantics of first order logic.

(OR)

b) Explain knowledge engineering process in First Order Logic.

14. a) Explain neural networks in learning process with an example.

(OR)

b) Explain EM algorithm with example.

15. a) Explain the components of communication.

(OR)

  b) Describe the fundamentals of a language.
     SECTION-C

ANSWER ANY TWO QUESTIONS: **(2X20=40)**

16. i) Explain the various kinds of agent programs in intelligent systems.(10)

   ii) Explain *minimax* search procedure with alpha beta cut off. (10)

17. i) Explain forward chaining and backward chaining (10)

   ii) Explain propositional logic and compare with the first order logic.(10)

18. i) Explain semantic interpretation with example.   (10)

   ii) Explain bottom-up parsing and top-down parsing with example.   (10)

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