



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

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

**THIRD SEMESTER – NOVEMBER 2017**

**CS 3950 - ARTIFICIAL INTELLIGENCE**

Date: 15-11-2017  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**SECTION -A**

**ANSWER ALL THE QUESTIONS:**

**(10X2=20)**

1. What is AI?
2. How AI differs from knowledge based system?
3. Write down the criteria used to evaluate search strategies.
4. What is local maxima?
5. What is heuristic?
6. What is predicate logic?
7. Define ontological engineering?
8. Define inductive learning?
9. What are context free grammars?
10. What is reinforcement?

**SECTION-B**

**ANSWER ALL THE QUESTIONS**

**(5X8=40)**

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

**(OR)**

b) Explain the uninformed search strategies in problem solving.

12. a) Explain A\* algorithm and its application.

**(OR)**

b) Explain constraint satisfaction technique with an example.

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

**(OR)**

b) Compare propositional and first order logic.

14. a) Explain decision tree learning

**(OR)**

b) Explain EM algorithm with example.

15. a) Explain component steps of communication.

(OR)

b) Describe the fundamentals of a language.

### SECTION-C

**ANSWER ANY TWO QUESTIONS:**

**(2X20=40)**

16. i) Explain the structure of intelligent agents.

ii) Explain Hill Climbing search and Steepest Ascent Hill Climbing

17. i) Explain forward chaining and backward chaining

ii) Explain active and passive reinforcement learning.

18. i) Explain semantic interpretation with example.

ii) Explain minimax search procedure with alpha beta pruning.