## LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600034

M.Sc. DEGREE EXAMINATION - COMPUTER SCIENCE THIRD SEMESTER - NOVEMBER 2018

CS 3950 - ARTIFICIAL INTELLIGENCE

Dept. No. $\square$
Date: 01-11-2018

## SECTION-A

Answer All Questions

1. What is an agent?
2. Define heuristic function.
3. What is simulated annealing?
4. What are nonlinear constraints?
5. What is ontological engineering?
6. Define referential transparency?
7. What do you meant by cross validation?
8. What is inductive logic programming?
9. What is chart parsing?
10. What are context free grammars?

## SECTION -B

Answer All Questions
(5X8=40)
11.a) Explain utility based agents with a block diagram
(OR)
b) Write down the properties of environments which influence the agents.
12.a) Explain constraint satisfaction technique with an example
(OR)
b) Explain $A^{*}$ algorithm as an informal search procedure
13.a) Explain knowledge engineering process in First Order Logic (OR)
b) Compare propositional logic with First Order Logic
14.a) What is explanation based learning? Give an example
(OR)
b) Explain neural networks in learning process with an example
15.a) Explain the pragmatic interpretation of languages.
(OR)
b) Chomsky's four classes of grammatical formalisms

## SECTION - C

Answer any TWO Questions
(2X20=40)
16.i) Explain the various kinds of agent programs in intelligent systems
ii) Explain mini-max search procedure with alpha beta cut off.
17. i) Explain forward chaining and backward chaining in inference.
ii) Explain generalization in reinforcement learning.
18.i) Explain semantic interpretation of grammars
ii) Explain the Hill climbing algorithm and its merits and demerits.

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