

## MCA DEGREE IV SEMESTER EXAMINATION APRIL 2013

CAS 2402 ARTIFICIAL INTELLIGENCE  
(New Scheme - 2010 Revision)

Time: 3 Hours

Maximum Marks : 50

**PART A**  
(Answer *ALL* questions)

(15 x 2 = 30)

- I. (a) What is utility based agent?  
(b) Explain the structure of an agent.  
(c) What is a uniform search?
- II. (a) Explain optimal decisions in games.  
(b) Explain backtracking search and local search.  
(c) What is Heuristic function?
- III. (a) Explain the syntax of first order logic.  
(b) What is Resolution?  
(c) What is unification?
- IV. (a) What is Ontological Engineering?  
(b) What is state space search?  
(c) What is mental events and mental objects?
- V. (a) What is learning?  
(b) What are the forms of learning?  
(c) What is decision tree?

**PART B**

(5 x 4 = 20)

- VI. A. Explain the different types of agents.  
**OR**  
B. Explain searching with partial information.
- VII. A. What is constraint satisfaction problem?  
**OR**  
B. Explain online search agents and unknown environment.
- VIII. A. Explain effective propositional inference.  
**OR**  
B. Explain backward chaining and forward chaining with example.
- IX. A. Describe partial order planning.  
**OR**  
B. Explain planning with propositional logic.
- X. A. Describe inductive learning.  
**OR**  
B. Explain ensemble learning.

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