MCA DEGREE III SEMESTER EXAMINATION NOVEMBER 2013

CAS 2304 ARTIFICIAL INTELLIGENCE

(New Sheme - 2009 Admission onwards)
(Supplementary)

Time: 3 Hours Maximum Marks: 50

PART A

(Answer *ALL* questions)

(15 × 2 = 30)

I. (a) Explain the structure of agents.
(b) What is meant by rational agent?
(c) Write the algorithm of a simple problem solving agent.

II. (a) Explain the concept of chronological back tracking.
(b) Explain the concept of random restart hill climbing.
(c) What is meant by alpha beta pruning.

III. (a) Describe Herbrand's theorem.
(b) Define the inference rule And-Elimination.
(c) Represent the sentence "All Germans speak the same languages" in predicate calculus. Use speaks(x,1), meaning that person x speaks language l.

IV. (a) What is meant by reification?
(b) Write the advantages of backward state space search.
(c) Write a note on symbol splitting,

V. (a) Explain decision tree and decision list.
(b) Compare supervised learning and unsupervised learning.
(c) Define information gain.

PART B

(5 × 4 = 20)

VI. A. Compare and explain various uninformed search strategies.

OR

B. Explain the model based reflex agents and utility based agents in detail.

VII. A. Describe the recursive best first search algorithm.

OR

B. Explain the min-max algorithm in detail.

VIII. A. Explain the unification algorithm in detail.

OR

B. What do you meant by proof by refutation? Explain with an example.

IX. A. Explain the ontology of situation calculus.

OR

B. Describe the concept of reasoning with default information.

X. A. Describe the decision tree learning algorithm.

OR

B. Explain ADA BOOST algorithm.

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