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M.C.A. DEGREE IV SEMESTER EXAMINATION MAY 2015

CAS 2402 ARTIFICIAL INTELLIGENCE

(Regular and Supplementary)

Time: 3 Hours

Maximum Marks: 50

PART A

(Answer *ALL* questions)

(15 × 2 = 30)

- I. (a) What is rational agent?
(b) Define a well defined problem.
(c) What are the properties of task environments?
- II. (a) Write notes on hill climbing search.
(b) What is a heuristic function? Give an example.
(c) Define a game as a search problem.
- III. (a) Write notes on knowledge based agent?
(b) What is a horn clause?
(c) Describe the knowledge engineering process.
- IV. (a) Discuss the terms categories & objects.
(b) Write notes on the Ontology of Situational Calculus.
(c) Discuss on mental events and mental objects.
- V. (a) What is the difference between supervised and unsupervised learning?
(b) What is Inductive Learning?
(c) What is Reinforcement Learning?

PART B

(5 × 4 = 20)

- VI. Describe the different Uninformed Search Strategies.
OR
- VII. Write note on the different types of Agents.
- VIII. With an example, explain constraint satisfaction problem.
OR
- IX. What is Alpha-Beta Pruning?
- X. Explain resolution in First Order Logic.
OR
- XI. Explain propositional logic and its syntax and semantics.
- XII. Explain planning and planning graphs.
OR
- XIII. Write notes on Ontological Engineering.
- XIV. With example, discuss learning using decision trees.
OR
- XV. What is ensemble learning?
