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AI—273—2017

FACULTY OF SCIENCE

M.Sc. (CS) (Second Year) (Fourth Semester) EXAMINATION

MARCH/APRIL, 2017

(CBCS Pattern)

COMPUTER SCIENCE

Paper CS-403

(Elective–II)

(Artificial Intelligence)

(Wednesday, 26-4-2017) **Time : 2.00 p.m. to 5.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

1. Attempt the following (any *three*) : 15

   (*a*) Explain agents and environments.

   (*b*) Explain structure of agents.

   (*c*) Explain Heuristic function.

   (*d*) Explain adversarial search.

   (*e*) Explain syntax and semantics for first order logic.

2. Attempt the following (any *three*) : 15

   (*a*) Explain online search agents.

   (*b*) Explain searching with partial information.

   (*c*) Explain alpha-βeta pruning.

   (*d*) Explain constraint satisfaction problems (CSP).

3. Answer the following (any *three*) : 15

   (*a*) Explain imperfect real time decision.

   (*b*) Explain inference in first order logic.

   (*c*) Explain unification and lifting.

   (*d*) Explain forms of learning.

P.T.O.

4. Attempt the following (any *three*) : 15

   (*a*) Explain backward chaining.

   (*b*) Explain logical formulation of learning.

   (*c*) Explain EM algorithm.

   (*d*) Explain generalization in reinforcement learning.

5. Write short notes on (any *three*) : 15

   (*a*) Problem solving

   (*b*) Local search in continuous spaces

   (*c*) Optimal decision in games

   (*d*) Communication as action

   (*e*) Formal grammer for fragment of English.