Code: 9F00405c

MCA IV Semester Regular & Supplementary Examinations May 2018
ARTIFICIAL INTELLIGENCE
(For students admitted in 2011 (LC), 2012, 2013, 2014, 2015 & 2016 only)

Time: 3 hours   Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain the terms: (i) Agent. (ii) Rationality. (iii) Environment.
   (b) Solve the 15 puzzle problem using A* algorithm. Draw the state space and explain in detail.

Initial state

1	2	3	4
5	6		8
9	10	7	11
13	14	15	12

Goal state

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	

2   Explain Hill climbing and Simulated annealing techniques in detail.

3   Explain Alpha-Beta pruning with Minimax game tree.

4 (a) Explain Unification algorithm with an example.
   (b) Differentiate Propositional logic and First Order Logic.

5   Explain Partial Order Planning with an example.

6   Explain decision tree induction in detail.

7 (a) List the advantages and applications of expert systems.
   (b) Explain the components of an expert system.

8   Explain the expert system life cycle in detail.

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