Code: 9A05605

R09

B.Tech III Year I Semester (R09) Supplementary Examinations December 2015

ARTIFICIAL INTELLIGENCE

(Computer Science and Systems Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) What is the role of knowledge in solving an AI problem? Explain with example.
(b) With example differentiate between any-path problem and best-path problems.

2 Derive a genetic algorithm approach to the traveling salesperson problem.

3 (a) Explain Davis- Putnam algorithm for backtracking.
(b) Discuss completeness of resolution in detail.

4 (a) What is a subsumption lattice? Explain with example.
(b) Discuss a straight forward forward-chaining algorithm for FOL.

5 What are nonmonotonic logics? Explain them in detail.

6 (a) Explain the differences between posterior and prior probabilities with examples.
(b) Explain the concept utility theory with examples.

7 Write the drawbacks of the following:
(a) Version space approach.
(b) Current best learning.

8 Explain the following:
(a) Fuzzy sets.
(b) Crisp sets.
(c) Sigmoid function.

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