Code: 9A05605

R09

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2013
ARTIFICIAL INTELLIGENCE
(Computer Science & Systems Engineering)

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

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1 (a) Distinguish between problem tree and problem graph.
   (b) Discuss characteristics of production system.
   (c) Discuss how AI technique can be used to solve tic-tac-tie problem.

2 (a) What are the advantages of Heuristic search?
   (b) What are the optimization problems?
   (c) In what kind of problem space would depth first search be better than a breadth first search?

3 (a) What is the significance of knowledge representation? Compare and contrast database and knowledge base.
   (b) Compare forward vs backward reasoning.

4 (a) What is first-order logic? Explain syntax and semantics of first-order logic.
   (b) Explain the unification algorithm with an example.

5 (a) Discuss about "Ontological Engineering".
   (b) Explain about "Internet Shopping World".

6 (a) What is uncertain knowledge? How knowledge is acting under uncertainty?
   (b) Explain "Axioms of probability".

7   Briefly explain the following:
   (a) Inductive learning.
   (b) Learning decision trees.
   (c) Ensemble learning.

8   What is "Statistical Learning"? Explain neural networks with suitable example.

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