

Question Paper Code: 51390

## B.E/B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Sixth Semester

Computer Science and Engineering

## CS 2351/CS 61/10144 CS 601 - ARTIFICIAL INTELLIGENCE

(Common to Seventh Semester – Electronics and Instrumentation Engineering/Instrumentation and Control Engineering/Information Technology)

(Regulations 2008/2010)

(Common to PTCS 2351/10144 CS 601 – Artificial Intelligence for B.E. (Part-Time) Sixth Semester – Computer Science and Engineering – Regulations 2009/2010)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions.  $PART - A (10 \times 2 = 20 \text{ Marks})$ 

- 1. Define agent, agent function.
- 2. How to improve the effectiveness of a search based problem solving technique?
- 3. State the reasons why the inductive logic programming is popular.
- 4. How TALL and ASK are used in first order logic?
- 5. Define partial order planner?
- 6. What are the differences and similarities between problem solving and planning?
- 7. List any two applications of Temporal probabilistic models?
- 8. What is explanation-based learning?
- 9. List the issues that affect the design of a learning element.
- 10. How statistical learning differ from reinforcement learning?

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## $PART - B (5 \times 16 = 80 Marks)$

11. (a) Explain uninformed search strategies with suitable example.

OR

- (b) Outline the components and functions of any one of the basic kinds of agent programs.
- (a) Explain the forward chaining and backward chaining algorithm with an example.

OR

- (b) Outline the main steps of the knowledge engineering process for creating a knowledge base in FOL.
- 13. (a) Explain the concept of planning with state space search using example.

OR

- (b) Discuss the use of planning graph in providing better heuristic estimate with suitable example.
- 14. (a) Explain the method of handling approximate inference in Bayesian networks.

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- (b) State the role of Hidden Markov models in speech recognition.
- 15. (a) How does decision tree supports for learning? Explain with suitable example.

OR

(b) Write short notes on : (l) Statistical learning (2) Explanation based learning.

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