

**B.E./B.TECH.(Full-time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY, 2011**

**BRANCH: COMPUTER SCIENCE AND ENGINEERING  
V SEMESTER**

**CS 9304 - ARTIFICIAL INTELLIGENCE – R 2008**

**Time: 3 Hours**

**Max.Marks: 100**

**ANSWER ALL QUESTIONS  
PART – A (10 x 2 = 20 MARKS)**

1. Define “Intelligent Agents”.
2. Write the Hill climbing Search algorithm.
3. What is a greedy search technique?
4. Define “backtracking” in search.
5. What is resolution procedure?
6. Write the Baye’s Theorem.
7. What is inductive learning?
8. Write the applications of learning.
9. Write the advantages of language communication.
10. What is situation calculus? State its uses.

**PART – B (5 x 16 = 80 MARKS)**

11. Explain the different types of agents. (16)
12. (a) (i) State and explain the A\* algorithm. (8)  
(ii) Explain the constraint satisfaction problem. (8)
- (OR)
- (b) (i) State and explain the minimax algorithm. (8)  
(ii) How will you make decisions in games? (8)
13. (a) (i) Explain the Wumpus world problem. (5)  
(ii) Write the inference rules used in first order logic. (5)  
(iii) Distinguish between forward chaining and backward chaining inference. (6)
- (OR)
- (b) (i) Explain ontology as a knowledge representation technique. (8)  
(ii) What is Default reasoning? Explain Truth Maintenance Systems. (8)
14. (a) (i) Explain the decision tree algorithm for learning. (8)  
(ii) What is ensemble learning? (8)
- (OR)
- (b) Explain active and passive reinforcement learning. (16)
15. (a) Explain the phases of natural language processing. (16)
- (OR)
- (b) (i) Explain object recognition in detail. (8)  
(ii) Write the steps involved in Robot planning. (8)