B.Sc. (Hons.) Computer Science
Artificial Intelligence
Unique Paper Code: 32341601

Q1 Explain in detail the structure of different intelligent agents

Q2 Describe constraint satisfaction problem in detail?

Q3 Represent the following statements in predicate logic and convert the following to CNF form?

Q4 Explain A* Algorithm with example

Q5 Define al rational agent

Q6 How will you measure the problem solving performance?

Q7 State the reasons when the hill climbing often gets stuck

Q8 Differentiate between prepositional versus first order logic

Q9 Explain the following uninformed search strategies
- (i) Iterative deepening depth-first search
- (ii) Bidirectional search

Q10 Describe the Min-Max Algorithm and Alpha –beta Pruning

Q11 Describe the forward chaining and backward chaining algorithm with suitable Example

Q12 Consider the following facts

Team India

Team Australia

Final match between India and Australia

India scored 350 runs Australia score 350 runs India lost 5 wickets Australia lost 7 wickets

The team which scored the maximum runs wins

If the scores are same then the team which lost minimum wickets wins the match.

Represent the facts in predicate, convert to clause form and prove by resolution

"India wins the match".

Q13 List the characteristics of AI .Explain any five characteristics in detail

Q14 Consider the following statements

John likes all kinds of food

apples are food

chicken is food

anything anyone isn't killed by is food.

Bill eats peanuts and is still alive

Sue eats everything bill eats
- (i) translate these sentences into formulas in predicate logic
- (ii) prove that john likes peanuts using backward chaining
- (iii) convert the formulas of a part into clause form
- (iv) Prove that john likes peanuts using resolution

Q15 Explain the missionaries and cannibals problem

Q16 Is AI science or is it engineering or neither or both? Explain?

Q17 Explain inference procedure in FOL