

Government Engineering College, Rajkot

Computer Engineering Department

Subject: *Artificial Intelligence*

Subject Code: 3170716

B.E. Semester: 7th

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List of Experiments

1. Write a Prolog program which contains three predicates: male, female, parent. Make rules for following family relations: father, mother, grandfather, grandmother, brother, sister, uncle, aunt, nephew and niece.
2. Write a Prolog program to implement Water Jug Problem.
3. Solve 8 Puzzle Problem using A* Algorithm in any programming Language.
4. Convert the given Prolog predicates into Semantic Net.

```
cat(tom).  
cat(cat1).  
mat(mat1).  
sat_on(cat1,mat1).  
bird(bird1).  
caught(tom,bird1).  
like(X,cream) :- cat(X).  
mammal(X) :- cat(X).  
has(X,fur) :- mammal(X).  
animal(X) :- mammal(X).  
animal(X) :- bird(X).  
owns(john,tom).  
is_coloured(tom,ginger).
```

5. Construct the Conceptual Dependency for the given statements.
 - 1) John gives Mary a book
 - 2) John gave Mary the book yesterday.
6. Implement the Minimax algorithm for a simple tic-tac-toe game using Python Language.
7. Implement Bayesian Networks algorithm for the Monty Hall Problem using any programming Language.
8. Demonstrate Connectionist Model using Tool.
9. Implement Genetic Algorithm using any programming Language.
10. Write a PROLOG program based on list:
 - 1) To find the length of a list.
 - 2) To sum all numbers of list.
 - 3) To find whether given element is a member of a list.
 - 4) To append the list.
 - 5) To reverse the list.
 - 6) To find the last element of a list.
 - 7) To delete the first occurrence of an element from a list.
 - 8) To delete every occurrence of an element from a list.
 - 9) To find Nth element from the list.