



**Parul<sup>®</sup>**  
**University**

**Parul Institute of Technology, Limda, Vadodara**

**Subject:** Artificial Intelligence (303105307)

**Course:** B.Tech

**Year & Sem:** BTech Sem-V

**Branch:** Artificial Intelligence

## Assignment# 2

1. What is propositional Logic? Explain with example.
2. Explain mapping between knowledge and representation with neat diagram.
3. Explain different approaches (properties) towards knowledge representation.
4. Explain Property inheritance with the help of 'ISA' and instance attribute.
5. Explain resolution with example.
6. Describe the difference between propositional logic and predicate logic. Give an example of each.
7. Explain predicate logic in brief.
8. Explain inference rules/reasoning pattern for propositional logic.
9. List any three inference rules in predicate logic
10. Explain different issues in Knowledge Representation.?
11. Define Types of Reasoning in FOL.
12. Describe different knowledge paradigms.
13. Explain Frame notation with suitable example.
14. Prove by resolution technique.

1)

• Consider the following Knowledge Base:

1. The humidity is high or the sky is cloudy.
2. If the sky is cloudy, then it will rain.
3. If the humidity is high, then it is hot.
4. It is not hot.

**Goal:** It will rain.

2)

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1. Sunil likes all kind of food.
  2. Apple and vegetable are food
  3. Anything anyone eats and not killed is food.
  4. Anil eats peanuts and still alive
  5. Sohan eats everything that Anil eats.
- **Prove by resolution that:**  
**Sunil likes peanuts**

15. Change the following facts using first order predicate logic:

All Romans were either loyal to Caesar or hated him.

Everyone is loyal to someone.

People only try to assassinate rulers they are not loyal to.

Marcus tried to assassinate Caesar.

All men are people