1. How do you use predicate logic to represent the relationships between different classes of objects in a particular domain?
2. What are the key features of first-order logic, and how do they differ from propositional logic?
3. How might you use quantifiers in predicate logic to express statements about groups of objects or properties?
4. What is the difference between a predicate and a function in predicate logic, and how are they used to represent different types of relationships between objects?
5. How might you translate a complex English sentence into a logical formula using predicate logic, and what strategies would you use to avoid ambiguity or inconsistency?
6. How might you use truth tables or semantic trees to evaluate the validity or consistency of a particular logical formula in predicate logic?
7. How would you use predicate logic to represent the semantic structure of a particular natural language sentence or utterance, and what challenges might arise in this process?
8. What are some common strategies or techniques for simplifying or optimizing logical formulas in predicate logic, and how might you apply them in practice?
9. What are the key features of propositional logic, and how does it differ from other types of formal logic systems?
10. How might you use truth tables to evaluate the validity or consistency of a particular propositional formula, and what strategies would you use to simplify or optimize the formula?
11. What are some common errors or fallacies that can arise when using propositional logic to reason about complex arguments or statements?
12. What are the benefits and drawbacks of different methods for representing propositional formulas, such as truth tables, semantic trees, or logical equivalences?
13. How might you use propositional logic to represent and reason about the behavior of agents or actors in a particular social or economic system, such as a market, a political system, or a network of actors?
14. How is unification used in resolution?
15. Represent the following facts in Predicate Logic –

• Marcus was a man  
• Marcus was a Pompeian  
• All Pompeians were Romans  
• Caesar was a ruler.  
• All Romans were either loyal to Caesar or hated him.  
• Everyone is loyal to someone.  
• Men only try to assassinate rulers they are not loyal to.  
• Marcus tried to assassinate Caesar

1. How can you represent resolution in predicate logic?
2. What is resolution in propositional logic explain it by taking a suitable example?
3. What is uncertainty? Explain Bayesian network with example.
4. Represent the given facts in Semantic Net :- Every human, animal and bird is living thing who breathe and eat. All birds can fly. All man and woman are humans who have two legs. Cat is an animal and has a fur. All animals have skin and can move. Giraffe is an animal who is tall and has long legs. Parrot is a bird and is green in color.
5. What are the advantages of Bayesian belief network?