

1. Explain in detail the important trade-offs in choosing between depth-first and breadth-first search strategies and explain what difference it makes whether the search tree has finite maximum depth or not?
2. Consider the following sentences :
 - a. John likes all kinds of food.
 - b. Apples are food.
 - c. Chicken is food.
 - d. Anything anyone eats and isn't killed by is food.
 - e. Bill eats peanuts and is still alive.
 - f. Sue eats everything Bill eats.
 - (i) Translate these sentences into formulas in predicate logic.
 - (ii) Convert the formulas of part (i) to clause form.
3. Explain fuzzy logic and its use in digital image processing.
4. List and explain issues in knowledge representation.
5. Differentiate between monotonic (classical) reasoning and nonmonotonic (uncertainty) reasoning. Describe why monotonic reasoning is inadequate for solving real-world problems.
6. Show with example, how frames are efficient in capturing inheritance knowledge.
7. Comment on how understanding human behaviour is helpful for developing artificial intelligence approaches.
8. Describe in detail Dempster-Shafer Theory of Evidential reasoning.