Module#2 (LogBook–Contents)
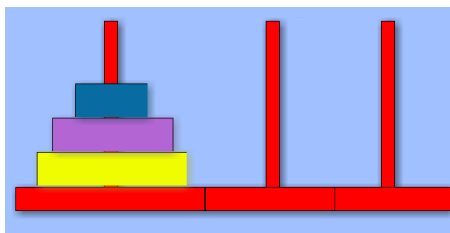
Submission deadline: January 3, 2024

1. Why searching is necessary in AI? Explain steps in performed by problem solving agent while solving a problem.

2. What do you mean by production system problem? Solve crypto-arithmetic problem: WRONG+WRONG = RIGHT.

3. What is constraint satisfying problem? Solve crypto-arithmetic problem: BASE + BALL =GAMES.

4. What do you mean by well defined problem? Solve crypto-arithmetic problem: TWO+TWO=FOUR.

5. What is problem space? Solve crypto-arithmetic problem SWIM+WEAR=RELAX.

6. Explain about the problem that can be solved using production rules with example.

7. You are given two jugs, a 5-gallon jug and a 7-gallon jug, a pump which has unlimited water supply and neither jug has any measuring marks on it. How can you get exactly 4 gallon of water in 7-gallon jug? sole the problem using production system.

8. Solve the 8-Queen problems in chess world, Place the queen such that no queen can attack each other.

9. Solve the tower of Hanoi problem with 4 tiles or disk (w, x, y, z) and 3 poles namely A,B,C from pole A to pole C.

10. Solve following crypt-arithmetic problems:

    ☑ LOGIC + LOGIC = PROLOG; ☑ LETS + WAVE = LATER

    ☑ CROSS + ROAD = DANGER; ☑ KYOTO + OSAKA = TOKYO