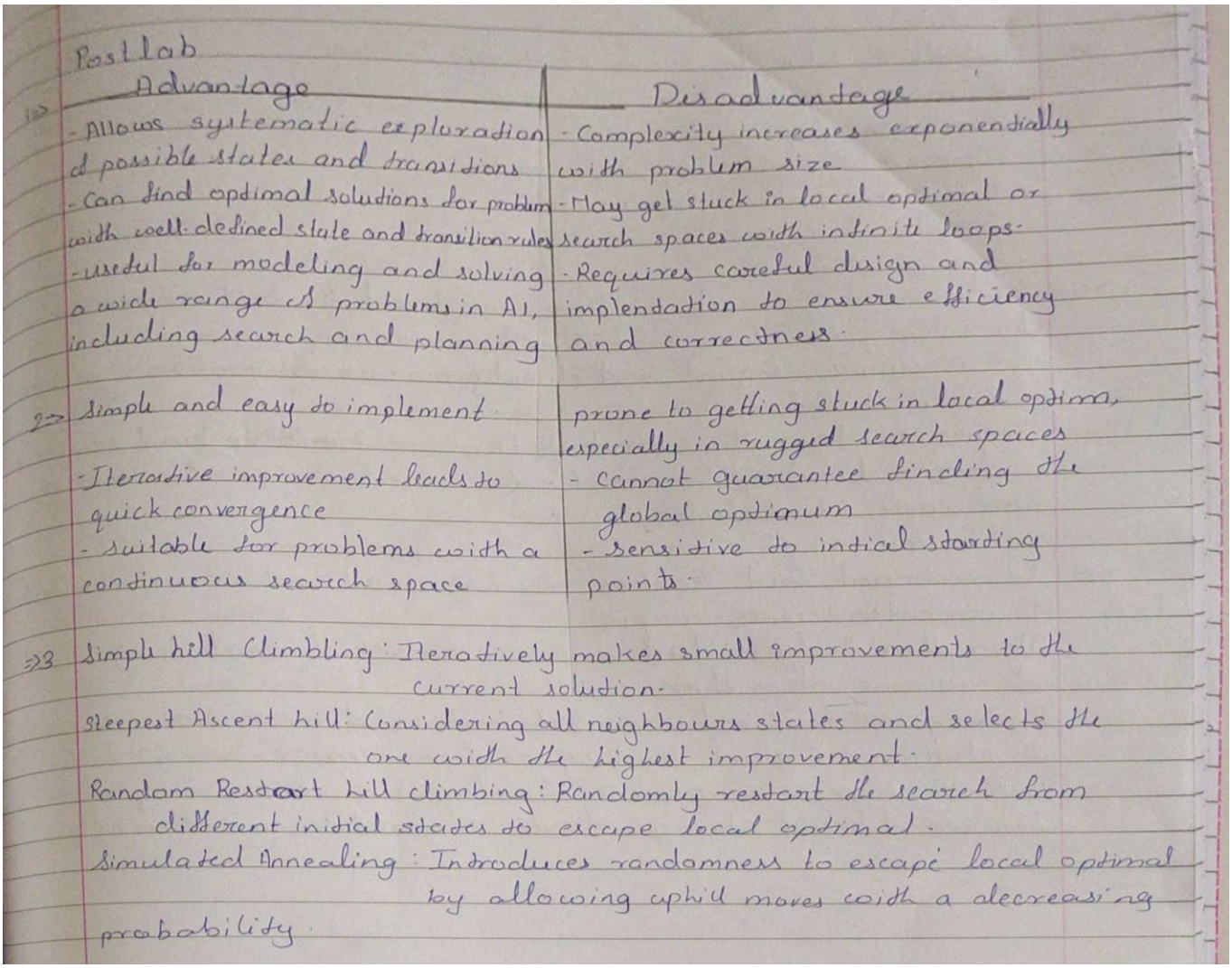
Post Lab Questions:

1. What are the advantages and disadvantages of state space search?
2. What are the advantages and disadvantages of the Hill Climbing approach?
3. Describe variations of Hill Climbing approach
4. Solve the Block World problem by using the STRIPS method.



Post lab

1=>

Advantage	Disadvantage
- Allows systematic exploration of possible states and transitions - Can find optimal solutions for problems with well-defined state and transition rules - useful for modeling and solving a wide range of problems in AI, including search and planning	- Complexity increases exponentially with problem size - May get stuck in local optimal or search spaces with infinite loops. - Requires careful design and implementation to ensure efficiency and correctness.
2=> Simple and easy to implement. - Iterative improvement leads to quick convergence - suitable for problems with a continuous search space	prone to getting stuck in local optima, especially in rugged search spaces - cannot guarantee finding the global optimum - sensitive to initial starting points.

=>3 Simple hill Climbing: Iteratively makes small improvements to the current solution.
Steepest Ascent hill: Considering all neighbours states and selects the one with the highest improvement.
Random Restart hill climbing: Randomly restart the search from different initial states to escape local optimal.
Simulated Annealing: Introduces randomness to escape local optimal by allowing uphill moves with a decreasing probability.