SUBJECT:- OPTIMIZATION TECHNIQUE
CLASS:- BCA 4TH SEM
PREPARED BY:- VIMAL SIR

- Define **Optimization** and its importance in problem-solving.

- What is the **Objective Function** in optimization? Give an example.

- Explain the concept of **Constraints** in optimization problems.

- What is **Linear Programming**? Write its mathematical formulation.

- Describe the **Graphical Method** for solving a Linear Programming Problem (LPP).

- What is the **Simplex Method**? Explain its steps.

- Define **Feasible Solution, Basic Feasible Solution, and Optimal Solution** in LPP.

- What are **Slack, Surplus, and Artificial Variables** in LPP?

- Explain the **Big-M Method** in Linear Programming.

- What is the **Duality Concept** in LPP? Explain with an example.

- Discuss the **Transportation Problem** and its methods of solving.

- What is the **Assignment Problem**? How is it different from the Transportation Problem?

- Explain the **Hungarian Method** for solving an Assignment Problem.

- What is **Dynamic Programming**? Give an example.

- Define **Queuing Theory** and its real-world applications.

- What is **Game Theory**? Explain the **Minimax Principle**.

- Explain the **North-West Corner Rule** for solving Transportation Problems.

- What is the **Stepping Stone Method**? Where is it used?

- Define **Inventory Control Models** and their types.

- Explain **Markov Chains** and their applications in optimization.