

Department of Computer Science and Engineering

National Institute of Technology Durgapur

Subject: Modelling & Simulation Lab (CSS752)

Assignment 1

Solving LPP using Graphical Method

Problem 1

A person requires 10, 12 and 12 units of chemicals **A**, **B** and **C** respectively for his gardens. A liquid product contains 5, 2 and 1 units of **A**, **B** and **C** respectively per jar. A dry product contains 1, 2 and 4 units of **A**, **B** and **C** per carton. If the liquid product sells for ₹ 3 per jar and the dry product sells for ₹ 2 per carton, how many of each should be purchased to optimize the cost and meet the requirements? Formulate the problem as a LPP and solve it by graphical method.

Problem 2

A company produces 2 types of hats. Every hat **H₁** requires twice as much labor as the second hat **H₂**. If the company produces only hat **H₂** then it can produce a total of 500 hats a day. The market limits daily sales of hat **H₁** and **H₂** to 150 and 250 respectively. The profit on hat **H₁** and **H₂** are ₹ 8 and ₹ 5 respectively. Formulate the problem as a LPP and find the optimal solution using graphical method.