

**National Institute of Technology Durgapur**  
**Dept. of Computer Science & Engineering**  
**Assignment 3**  
**CSS752: Modeling and Simulation Lab**  
**Transportation Problem using Vogel's Approximation Method (VAM)**

**Problem 1:**

Formulate the following transportation problem as an LPP model.

	<b>D<sub>1</sub></b>	<b>D<sub>2</sub></b>	<b>D<sub>3</sub></b>	<b>D<sub>4</sub></b>	<b>Supply</b>
<b>O<sub>1</sub></b>	6	4	1	5	14
<b>O<sub>2</sub></b>	8	9	2	7	16
<b>O<sub>3</sub></b>	4	3	6	2	5
<b>Demand</b>	6	10	10	4	

Also determine an initial basic feasible solution of this TP using VAM method.

**Problem 2:**

Formulate the following transportation problem as an LPP model.

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Available</b>
<b>A</b>	4	3	1	2	6	80
<b>B</b>	5	2	3	4	5	60
<b>C</b>	3	5	6	3	2	40
<b>D</b>	2	4	4	5	3	20
<b>Required</b>	60	60	30	40	10	

Find the IBFS of the transportation problem by VAM. Also find the optimal transportation plan.