6) Initial Basic Solution in Transportation problem using Row Minimum method in Linear Programming.

**PRE SESSION-6**

**Problem 1:**

Consider the transportation problem presented in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory** | **Warehouse** | | | **Supply** |
| **W1** | **W2** | **W3** |
| **F1** | 16 | 20 | 12 | 200 |
| **F2** | 14 | 8 | 18 | 160 |
| **F3** | 26 | 24 | 16 | 90 |
| **Demand** | 180 | 120 | 150 | 450 |

**IN SESSION-6**

**Problem 1:**

The Ushodaya departmental store has three plants located throughout a state with production capacity 80, 60 and 70 kilo grams of rice. Each day the firm must furnish its four retail shops R1, R2, R3, & R4 with at least 40, 60, 50, and 60 gallons respectively. The transportation costs (in Rs.) are given below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Store** | **Retail Shop** | | | | **Supply** |
| **1** | **2** | **3** | **4** |
| **1** | 3 | 5 | 7 | 6 | 80 |
| **2** | 2 | 5 | 8 | 2 | 60 |
| **3** | 3 | 6 | 9 | 2 | 70 |
| **Demand** | 40 | 60 | 50 | 60 |  |

**POST SESSION-6**

**Problem 1:**

The distribution manager of a company needs to minimize global transport costs between a set of three factories (supply points) S1, S2, and S3, and a set of four distributors (demand points) D1, D2, D3, and D4. The following table shows the transportation cost from each supply point to every demand point, the supply of the product at the supply points, and the demand of the product at the demand points

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| F/D | D1 | D2 | D3 | D4 | Supply |
| S1 | 19 | 30 | 50 | 10 | 7 |
| S2 | 70 | 30 | 40 | 60 | 9 |
| S3 | 40 | 8 | 70 | 20 | 18 |
| Demand | 5 | 8 | 7 | 14 | 34 |