Transportation Problem

The objective of transportation problem is to determine the amount to be transported from each origin to each destinations such that the total transportation cost is minimized.

The Structure of the Problem

Let there be m origins and n destinations. Let the amount of supply at the i th origin is ai. Let the demand at j th destination is bj.

The cost of transporting one unit of an item from origin i to destination j is cij and is known for all combinations (i,j). Quantity transported from origin i to destination j be xij

The objective is to determine the quantity xij to be transported over all routes (i,j) so as to minimize the total transportation cost. The supply limits at the origins and the demand requirements at the destinations must be satisfied.