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**Topic:-Literature review of a study of Transportation Problem for an Essential Item of Southern Part of North Eastern Region of India as an OR Model**

**Submitted to:- Prof.Dega Nagaraju**

**A study of Transportation Problem for an Essential Item of Southern Part of North Eastern Region of India as an OR Model**

In this paper we formulate an OR model from the collected data concerning with the transportation of an essential item, rice, from different suppliers of Silchar to different destinations in Mizoram. In this study an attempt has been made to analyze the optimal solution with basic feasible solutions obtained using different methods.

Mizoram, a part of southern region of North East India, not being well connected from the other parts of the nation as well as the North East region, depends on the market of the adjacent district Silchar of Assam for its essential goods like rice, flour, salt etc. Different suppliers of Silchar regularly supply rice to the different markets of Mizoram. As such the related data has been collected from the concerned suppliers for the purpose of the mathematical formulation.

In this problem we make a transportation schedule for rice, as being the essential commodity (main food of the people) for the state of Mizoram. Combining the data of the tables 2, 3 and 4, we get the following transportation model to determine an optimal schedule so as to minimize the transportation cost for rice to different markets of Mizoram.

The problem of minimization of the total transportation cost is commonly

Treated in literature as a basic single objective linear transportation model. The transportation time is relevant in a variety ofreal transportation problems, too. There are

Two types of problems regarding the transportation time

(i) Minimization of the total transportation time (linear function, as aggregate the products of transportation time and quantity), called minimization of 1st transportation time, and

(ii) Minimization of the transportation time of the longest active transporting route (nonlinear function), called minimization of 2nd transportation time or problem of Brasov

For (ii), the total number of units on transportation operation with longest time is minimized

In .An important variant of the total transportation time problems is formulated and resolved.

The transportation time of the longest active transportation route(s) in problems where all destinations do not have the same importance are analyzed as the three classes single criteria and multi criteria problems of the transportation time. The corresponding algorithms are developed in case of problems with priority according to demands of the subset of the destinations

Some criteria problems of transportation problems are shown, too another typical transportation problems are exposed in and a Research directive in Theoretical approach of Multi-Objective Programming and Goal Programming are shown in In this paper are formulated some variants of the total transportation time Problem. The algorithms developed for determination theirs optimal solutions are Presented and implementations are illustrated by means of a numerical example.

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