

**APPLICATION OF HETEROGENEOUS RESOURCE
ALLOCATION PROBLEM FOR THE OPTIMAL SOLUTION BY
REDUCING THE SET OF ACTIVITIES**

MAYURA MATHANKAR ¹ AND H. S. LUNGE ²

¹Sydenham College of Commerce & Economics,
Churchgate, Mumbai (M.S.), India

² Shri Shivaji Scienc College, Amravati (M.S.), India

Abstract

A general resource allocation problem considers the allocation of a single resource among numerous activities. The level of each activity is represented by a continuous variable and is associated with a convex performance function. The resource allocation problem considers minimizing the sum of all performance functions so that the sum of all (non negative) activity levels does not exceed the amount of available resources.

In resource allocation problem the resources contain the units of same nature. In heterogeneous resource allocation problem (HRAP), the units of resources do not all share the same characteristic. These heterogeneous resources are allocated to the set of activities. In this paper an attempt has been made to develop the procedure to reduce the set of activities that can be eliminated from the original problem in such a way that the optimal solution of original problem can be obtained from the optimal solution to the reduced problem.