
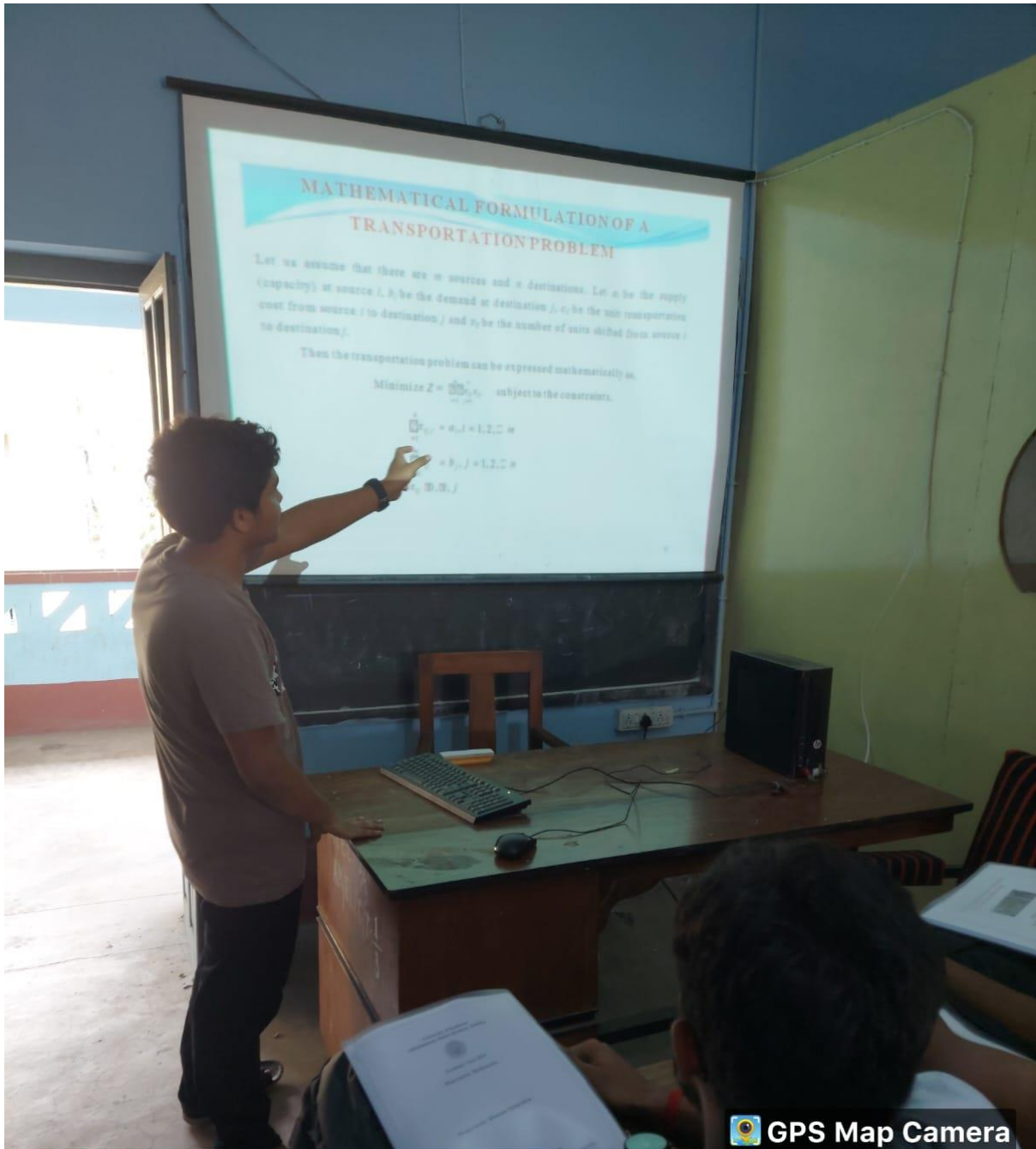




**Sainthia, West Bengal, India**  
WMXW+J66, opposite GP Heights, Sainthia, West Bengal 731234, India  
Lat 23.949106°  
Long 87.695421°  
03/10/23 01:07 PM GMT +05:30

 **GPS Map Camera**



## MATHEMATICAL FORMULATION OF A TRANSPORTATION PROBLEM

Let us assume that there are  $m$  sources and  $n$  destinations. Let  $a_i$  be the supply (capacity) at source  $i$ ,  $b_j$  be the demand at destination  $j$ ,  $c_{ij}$  be the unit transportation cost from source  $i$  to destination  $j$  and  $x_{ij}$  be the number of units shifted from source  $i$  to destination  $j$ .

Then the transportation problem can be expressed mathematically as,

$$\text{Minimize } Z = \sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij} \quad \text{subject to the constraints,}$$

$$\sum_{j=1}^n x_{ij} = a_i, i = 1, 2, \dots, m$$

$$\sum_{i=1}^m x_{ij} = b_j, j = 1, 2, \dots, n$$

$x_{ij} \geq 0, \forall i, j$




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Sainthia, West Bengal, India  
WMXW+F2G, College Rd, near Collage, Muradihi P, Sainthia, West Bengal  
731234, India  
Lat 23.948634°  
Long 87.694723°  
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**Sainthia, West Bengal, India**

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