[Frequently Asked Questions]

Assignment

Subject:	Business Economics
Course:	B.A., 4th Semester, Undergraduate
Paper No. & Title:	Paper – 403 Quantitative Techniques for Management
Unit No. & Title:	Unit - 2 Transportation & Assignment
Lecture No. & Title:	Lecture – 3 Assignment

Frequently Asked Questions

Q1. What is Assignment problem?

A1. The assignment problem is the special case of the transportation problem in which the objective is to assign a number of origins to the equal number of destinations at a minimum cost, minimum time or maximum profit.

Q2. How is assignment problem different from transportation problem?

A2. The basic difference between transportation and assignment problem is given below:

Transportation Problem	Assignment Problem
This problem contains specific demand and requirement in columns and rows	The demand and requirement in each column or row is one
The no. of rows may not be equal to the no. of columns.	It is a square matrix. The no. of rows must be equal to the no. of columns.
There is no restriction in the number of allotments in any row or column	There should be only one allotment in each row and each column

Q3. Which method is used to solve assignment problem?

A3. Hungarian method

Q4. What is unbalanced assignment problem?

A4. When number of rows and columns of the assignment matrix are not equal, the assignment problem is unbalanced.

Q5. How to solve unbalanced assignment problem?

A5. Unbalanced assignment problem is converted into balanced assignment problem by adding a dummy row or a column with zero assignment cost.

Q6. What are the values of the commodity supplied to cells in the assignment matrix?

A6. The amount of commodity supplied from *i* to *j* be denoted as x_{ij}.

Here x_{ij} is defined as

$x_{ij} = 1$, if the *ith* origin is associated to the *jth* destination

$x_{ij} = 0$, if the *ith* origin is not associated to the *jth* destination

Q7. When optimal solution is achieved in assignment problem?

A7. If the minimum number of covering lines is n, an optimal assignment of zeros is achieved.

Q8. What are the values of demand and supply for assignment problem?

A8. One.

Q9. How maximization assignment problem is solved?

A9. Maximization assignment problem is converted into minimization by subtracting all elements from the maximum element of the matrix.