Glossary

1. Linear Programming

It is a mathematical programming technique to optimize performance under a set of resource constraints.

2. **Objective function**

It is an expression representing the total profit or cost of caring out a set of activities at some levels.

3. Constraint

It is a kind of restriction on the total amount of a particular resource requested to carry out the activities at various levels.

4. Graphical solution methods

(i) Search approach method (ii) ISO-profit or ISO-cost approach method.

5. Unbounded solution

When the values of the decision variables may be increased indefinitely without violating any of the constraints, the solution space is unbounded. The value of objective function, in such cases, may increase or decrease indefinitely. Thus both the solution space and the objective function value are unbounded.

6. Feasible solution

Any solution to a general linear programming problem (LPP) which also satisfies the nonnegative restrictions of the problem, is called a feasible solution to the general LPP.

7. Optimal solution

Any feasible solution which optimizes the objective function of a general LPP is called an optimal solution to the general LPP.

8. Surplus variable

It represents the amount by which solution values exceed a resource.

9. Slack variable

It represents the amount by which a resource exceeds solution values.

10. Artificial variable

It is a variable used to get the sorting basic feasible solution, so that simplex method is used as usual until the optimal solution is obtained.