

OBJECTIVES:

- To establish theories and algorithms to model and solve the problems.
- To assign a number of jobs to an equal number of machines so has to minimize the total cost
- To find meaning in the provided data and determine what variations are meaningful and which once occur merely by chance.

Learning Outcomes: After learning this course, the student will be able

1. To solve the problems in logistics
2. To find a solution for the problems having space constraints
3. To minimize the total elapsed time in an industry by efficient allocation of jobs to the suitable persons.
4. To find a solution for an adequate usage of human resources
5. To find the most plausible solutions in industries and agriculture when a random environment exists.

COURSE :

1. IBFS of transportation problem by using North- West corner rule, Matrix minimum method and VAM
2. Optimum solution to balanced and unbalanced transportation problems by MODI method (both maximization and minimization cases)
3. Solution of Assignment problem using Hungarian method (both maximization and minimization cases),
4. Solution of sequencing problem—processing of n jobs through two machines
5. Solution of sequencing problem- processing of n jobs through three machines
6. To perform Project scheduling of a given project (Deterministic case-CPM).
7. To perform Project scheduling of a given project (Probabilistic case-PERT).
8. Graphical method of solving for $m \times 2$ and $2 \times n$ games.
9. Solution of $m \times n$ games by dominance rule.
10. Solution of $n \times n$ games by using matrix oddment method.
11. Linear programming method for solving $m \times n$ games.

LIST OF BOOKS FOR STUDY:

1. Operations research – S.D. Sharma, 2014
2. Operations research – Taha. H.A., 2014

LIST OF BOOKS FOR REFERENCE:

1. Operations research –Wagner, 2015.
2. Operations research – Kanthi swaroop, 2012.
3. Operations research – V.K. Kapoor, 2014.