

4/1/23

UNIT - I

Operation Research

Introduction :

Operation Research is introduced by MC CLOSKEY and TREFTHEN in the year 1940 at UK. In village of that it is first context in Military operation for 2nd world war for allocating resources.

Meaning :

Operation Research is systematic and scientific approach for study of an operation.

Definition :

It means scientific approach for problem solving for executive Management.

Scope :

- 1) Agriculture
- 2) Finance
- 3) Industry
- 4) Marketing
- 5) plan HRM.

Models :

It is simple representation of a problem.

Phases :

- * Formulating problem.
- * Finding a solution.
- * Testing a solution.
- * Implementation.
- * Control of solution.

Model Advantages :

- * Systematic
- * Decision
- * Simple
- * Decision to management
- * Research Implementation.

OR is a optimum result in accurate result. Minimize cost & Maximize profit.

Linear equation programming.

1947 - Dantzig.

a) Linear equation.

b) Graphical Method.

c) Simplex Method.

↳ i) simple Simplex Method

ii) Dual Method.

iii) Big method.

a) Linear Equation method.

its structure

- ★ Profit maximization and cost Minimization
 - ★ Use limited Resources
 - ★ Availability Resources
 - ★ Constant, Non negative constrain.
- $x_1 + x_2 \geq 0$.

Formulate the Linear programming.

- ★ maximum profit \leq Less than
- ★ Minimum cost \geq Greater than

Problem.