

Q6) Tools of Operation Research

- (1) Linear Programming.
- (2) Queuing Theory.
- (3) Inventory Control.
- (4) Net work analysis.
- (5) Replacement problem.
- (6) Sequencing.
- (7) Inter Programming.
- (8) Assignment problems.
- (9) Transportation problem.
- (10) Decision Theory and Game Theory.
- (11) Markov Analysis.
- (12) Simulation.
- (13) Dynamic Programming.
- (14) Goal Programming.
- (15) Symbolic logic.

• Linear Programming

Linear Programming technique is used to find solution for optimizing a given objective. This technique used to allocate scarce resources in an optimum manner in problem of scheduling product mix etc.

• Queuing Theory

This theory deals with the situation in which queue is formed.

It ~~also~~ Ex:- Aircraft waiting for landing.

• Inventory Control Method

It aims at optimizing inventory levels. Inventory planning answers two questions: how much to buy and when to buy.

• Network Analysis

This model helps the managers to plan, schedule, monitor and control large project. Such as construction of building.

• Replacement problem

It concerned with the situation arise when some items such as men, machine, electric bulbs etc. require replacement due to their decreasing efficiency, failure or down.

• Sequencing

This model developed to find sequence for processing a job, so the total elapsed time for all the jobs will be minimum.

• Decision Theories and Game Theories

- Decision theory is primarily concerned with decision making under the condition of risk and uncertainty.
- Game theory is concerned with decision making under conflict.