

Frequently Asked Questions

1. What is operation research concerned with?

Answer:

Operation research is concerned with providing the decision maker with the decision aids like a total system orientation, scientific methods of investigations and models of reality, generally based on quantitative measurement and techniques.

2. What are the other names for Operations Research?

Answer:

As the discipline of operation research grew, many other names such as Operations Analysis, Systems Analysis, Decision Analysis and Management Science.

3. What are the different methodologies adopted in Operations Research?

Answer:

The different methodologies adopted are Interdisciplinary, methodological, Holistic and Objectivistic.

4. What is an interdisciplinary approach?

Answer:

The interdisciplinary approach a team of individuals specializing in mathematics, statistics, economics, engineering, computer science, psychology is organized so that each aspect of the problem can be analyzed by a particular specialist in that field in order to arrive at an appropriate and desirable solution of the problem.

5. What does the scientific method consist of?

Answer:

The scientific method will consist of observing and defining the problem, formulating and testing the hypothesis, analysing the results of the test and then deciding whether to accept the hypothesis or reject.

6. What does a holistic approach examine?

Answer:

The holistic approach an operation Research team examines the relative importance of all conflicting and multiple objectives and validity of the claims of various departments of the organizations from the perspective of the whole organization.

7. Why is the objectivistic approach used in 'OR'?

Answer:

In the objectivistic approach the operations research seeks to obtain an optimal solution to the problem under analysis. For this a measure of desirability or effectiveness is defined based in the objectives of the organization.

8. What are the three phases of the scientific method?

Answer:

There are three phases of the scientific method on which the Operations Research practice is based. – Judgment phase, Research phase and Action phase.

9. What are the activities in the judgment phase?

Answer:

In the judgment phase we include the following activities in deciding the effectiveness of the measures: Identification of the real - life problem, Selection of an appropriate objective and the value of various variables related to the objective, Application of the

appropriate scale of measurement, Formulation of an appropriate model of the problem, abstracting the essential information's so that a solution at the decision maker's goals can be sought.

10. What does the research phase utilize?

Answer:

The research phase utilizes Observations and data collections for a better understanding of the problem, Formulating of hypothesis and models, Observation and experimentation to test the hypothesis on the basis of additional data, Analysis of the available information and verification of the hypothesis using pre-established measures of desirability, Predictions of various results from the hypothesis and Generalizations of the result and consideration of alternative methods.

11. What is the use of the action phase?

Answer:

The action phase consists of making recommendations for implementing the decision by an individual who is in the position to implement results depending on the environment in which the problem occurred, objective, assumption and omissions of the model of the problem.

12. How is an operation research used in finance and accounting function?

Answer:

In Finance and accounting function, operation research is used in various areas like dividend policies, investment, portfolio management, auditing, balance sheet, cash flow analysis for making decisions. It is also useful for analysis the capital resources of the organization with respect to break even analysis, capital budgeting, cost allocation and control, financial planning. It also is creating the claim and complaints procedure and public accounting.

13. Where do we apply the 'OR' in the field of marketing?

Answer:

In the field of marketing the operation research can be applied while making decisions like selection of product-mix, marketing planning, export planning. Identifying the sales effort, allocation and assignments and also in advertising and media planning.

14. What is a model?

Answer:

A model is an abstraction of essential elements of the system which is constructed in various forms and establishing a relationship between the variables and parameters of the systems.

15. What does a model examine?

Answer:

A model examines the behavioural changes of a system without disturbing the ongoing operations. Models can be classified based on structures, purpose, time reference, degree of certainty and method of solution.