

Chapter 1 Introduction

1.1 History of Operations Research

- Part of industry engineering
- WW2 extensive military use
- Post-WW2 extend to process type industry
- 1960 extend to all type industries
- 1970 extend to social/urban operations
- 1980 integrated with MIS

1.2 Natures of O.R.

- research on operations
 - conduct and coordinate
- search for perfection
 - system-wide view

1.3 Characteristic of O.R.

- (1) Focus on managerial decisions
- (2) Scientific approach
- (3) System approach
- (4) Quantitative model
- (5) Use of computer

1.4 Basic Definition

- O.R. is concerned with scientifically decide how to best design and operation a man-machine system, usually under condition required allocation of limited resource.

1.5 Contributions of O.R.

- structure problem into a mathematical model
- explore a system approach to obtain a solution
- develop an optimal solution

1.6 Limitations

- Time – consuming
- Lack of acceptance
- Difficulty in uncertainty measurement
- Expensive