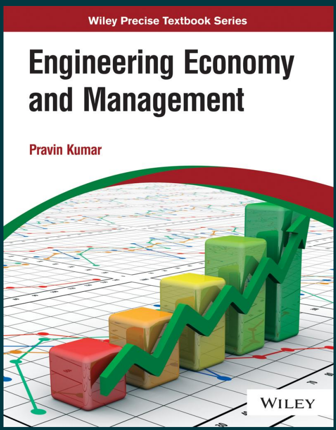
WILEY



Engineering Economy and Management

By Pravin Kumar

Paperback 9788126579921 ₹999.00

Pages: 516

Description

Engineering Economy and Management highlights the importance of economics and management in engineering and helps engineers in managerial decision making. It provides comprehensive coverage of the subject from basic principles to state-of-the-art concepts and applications. This book is common to all students in engineering discipline and is very useful in evaluating the economic merits and demerits of various solutions to engineering problems. Engineering problems may involve the decisions related to resources and their allocation. Engineering economics is closely associated with conventional microeconomics; but here, its focus is on problem solving at operational levels.

About the Author

Pravin Kumar

Pravin Kumar is working as an Associate Professor in the Department of Mechanical Engineering, Delhi Technological University, Delhi. He obtained his PhD in Supply Chain Management from IIT Delhi and M. Tech. in Industrial Management from IIT (BHU) Varanasi. He has more than 19 years of teaching and research experience. His research area is supply chain and operations management. He has published more than 50 research papers in international journals.

Table of Contents

Preface

About the Author

Chapter 1 Introduction to Engineering Economics

1.1 Introduction

1.2 Concept of Efficiency

1.3 Theory of Demand

1.4 Elasticity of Demand

1.5 Supply and Law of Supply

1.6 Indifference Curves

1.7 Budget Line

1.8 Welfare Analysis

Chapter 2 Managerial Economics

2.1 Introduction

2.2 Scope of Managerial Economics

2.3 Techniques of Managerial Economics
2.4 Applications of Managerial Economics
Chapter 3 Money, National Income, and Goods and Services Tax
3.1 Money
3.2 National Income
3.3 Goods and Services Tax
Chapter 4 Poverty, Unemployment, and Inflation
4.1 Scarcity
4.2 Poverty
4.3 Unemployment
4.4 Inflation
Chapter 5 Banking Systems
5.1 Introduction to Banking Systems
5.2 Types of Banks
5.3 Quantitative Instruments for Credit Control
5.4 Types of Banking
Chapter 6 Market Structures
6.1 Introduction
6.2 Perfect Competition
6.3 Monopoly
6.4 Monopolistic Competition
6.5 Oligopoly
6.6 Duopoly
6.7 Monopsony
6.8 Monopoly and Monopsony: A Comparison
Chapter 7 Marketing Management
7.1 Introduction
7.2 Marketing Mix
7.3 Market Segmentation
7.4 Exchange and Transactions
7.5 Marketing Research
7.6 Scope of Marketing
7.7 Product Life Cycle
7.8 Demand Forecasting
Chapter 8 Concepts in Management
8.1 Introduction
8.2 Characteristics of Management
8.3 Scope of Management

8.4 Classical School of Management

8.5 Functions of Management

8.6 Levels of Management

8.7 Skills of Management

8.8 Managerial Roles

8.9 Administration and Management

Chapter 9 Human Resource Management

9.1 Human Resource Management

9.2 Human Resource Planning

9.3 Recruitment and Selection

9.4 Job Design

9.5 Merit Rating

Chapter 10 Corporate Social Responsibility and Business Ethics

10.1 Corporate Social Responsibility

10.2 Types of Corporate Social Responsibilities

10.3 Ethics

Chapter 11 Production and Operations Management

11.1 Production and Operations Management

11.2 Objectives of Production Management

11.3 Production Systems

11.4 Facility Location

11.5 Plant Layout

Chapter 12 Demand Forecasting and Cost Estimation

12.1 Introduction

12.2 Forecasting Horizons

12.3 Steps to Forecasting

12.4 Forecasting Methods

12.5 Seasonal Adjustments

12.6 Forecasting Performance Measures

12.7 Cost Estimation

12.8 Elements of Cost

12.9 Computation of Material Variances

12.10 Break-Even Analysis

Chapter 13 Time Value of Money

13.1 Introduction

13.2 Simple Interest

13.3 Compound Interest

13.4 Present Worth Analysis

13.5 Future Worth Analysis
13.6 Annual Cash Flow Analysis
13.7 Rate of Return Analysis
13.8 Arithmetic Gradient
13.9 Geometric Gradient
13.10 Continuous Compounding
13.11 Normal and Effective Interest Rate
13.12 Perpetual Payment
Chapter 14 Project Evaluation
14.1 Introduction
14.2 Determining Minimum Attractive Rate of Return
14.3 Payback (Payout) Period Method
14.4 Benefit–Cost Ratio
Chapter 15 Comparison Among Alternatives
15.1 Introduction
15.2 Basis for Comparison of Alternatives
15.3 Study Period
15.4 Useful Lives of Alternatives Are Equal to the Study Period
15.5 Useful Lives of Alternatives Are Unequal
15.6 B–C Ratio Method for Comparison of Alternatives
Chapter 16 Depreciation and Taxes
16.1 Introduction
16.2 Some Important Terms Used in Depreciation
16.3 Classical Depreciation Methods
16.4 Modified Accelerated Cost Recovery System
16.5 Taxes
Chapter 17 Replacement Analysis
17.1 Introduction
17.2 Reasons for Replacement Analysis
17.3 Lives of Assets
17.4 Determining the Economic Life of a Challenger
17.5 Determining the Economic Life of a Defender
17.6 After-Tax Replacement Studies
Chapter 18 Concept of Financial Statement
18.1 Introduction
18.2 Sources of Company Information
18.3 Sources of International Economic Data
18.4 Financial Analysis

18.5 Financial Statement

18.6 Trading Account

18.7 Profit and Loss Account

18.8 Balance Sheet Requirements

18.9 Distinction between Profit and Loss Account and Balance Sheet

Chapter 19 Financial Ratios

19.1 Introduction

19.2 Types of Financial Ratios

19.3 Advantages and Limitations of Ratio Analysis

Chapter 20 Capital Budgeting

20.1 Introduction

20.2 Capital Financing and Allocation Functions

20.3 Sources of Capital Funds

20.4 Capital Asset Pricing Model

20.5 Weighted Average Cost of Capital

20.6 Leasing Decisions

20.7 Capital Allocation

Chapter 21 Decision Making

21.1 Introduction

21.2 Types of Decision-Making Environments

21.3 Decision Tree Analysis

21.4 Multiple Criteria Decision Making

Summary

Points to Remember

Multiple-Choice Questions

State whether True/False

Fill in the Blanks

Review Questions

Exercises

Appendix A

Statistical Tables and Procedures

Appendix B End-of-Period Compound Interest Tables

Appendix C Answers to Objective Type Questions

Bibliography

Index