PROBLEMS AND SOLUTIONS

Advanced Management Accounting

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Problems and Solutions: Advanced Management Accounting has benefited from an extensive development process. Over 30 faculty reviewers, students and industry professionals provided feedback about the accuracy and relevance of the content as well as suggestions for its improvements. While we could not incorporate every suggestion from everyone, we do acknowledge that their feedback was invaluable in our attempt at creating the best possible Problems and Solutions: Advanced Management Accounting book.

Consultant Board
The consultant board provided us with a detailed and critical analysis of each chapter and worked with us throughout the development of the book. We would like to thank the following for their time and commitment:

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Supplement Authors
This supplement includes introduction to the major concepts of each chapter, definitions and background for each concept, applications of data and analytical problems that can be discussed in the class.

Sanjay Kumar Pandey  
Editorial Head, Carvinowledge Press

Student Reviewers
We took the help of many students who class-tested the manuscript, evaluated it for clarity, and assessed each feature. Their comments helped us expand the book’s content, improved the pedagogical features, and strengthened the assessment features. We are thankful to the following:

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Preface

Problems and Solutions: Advanced Management Accounting is a comprehensive book explaining concepts, problems of advanced cost management in a lucid and informative manner. It has been developed exclusively for the students of CA Final (new course). Key features of the textbook are:

- Besides comprehensive coverage of the syllabus of Advanced Management Accounting prescribed by Institute of Chartered Accountants of India, it provides extra inputs to students to give them a cutting edge in examinations.
- Complex concepts have been described in an easy-to-understand manner with simple presentation through charts and illustrations.
- While maintaining a solution and practice oriented approach, the book provides a comprehensive review of practical concepts. Special efforts have been made to maintain an appropriate balance between theoretical concepts and practical questions.
- By exclusively discussing problem solving techniques, the book effectively addresses to the most important query among students pertaining to problem solving.
- Each chapter begins with overview to help students know, at a glance, what they would learn in the chapter.
- Points to Remember incorporated in each chapter recapitulate the concept for revision purposes.

The book is divided into 2 sections, namely:

Section I–Practical Costing
Section I provides practical questions and answers to all cost concepts and applications in conformity with the syllabus of Advanced Management Accounting prescribed by Institute of Chartered Accountants of India.

Section II–Operations Research
Section II covers theories, concepts, applications and numericals related to Operations Research.

Glossary of various costing and OR concepts are given at the end of chapter for quick recap of the important topics discussed through.

The Author expresses his sincere gratitude to the Institute of Chartered Accountants of India for granting permission to use the past examination questions and Revision Test Paper (RTP) Questions.

Valuable suggestions and constructive feedback from learners is welcome and would be gratefully acknowledged.

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I am grateful to my esteemed colleagues, friends and students who have contributed to this book by advising me and by giving constructive feedback. This book would not have taken its present shape without the continuous support and encouragement from the editorial and production team of Carvinowledge Press and it has been a real pleasure working in coordination with their extremely professional set up. I have immensely benefitted from referring to several books and publications. Thus, I owe an enormous intellectual debt to all authors, publications, publishers and institutions whose work I have drawn upon in developing this textbook. I extend my heartfelt gratitude to Aggarwal Law House, which has been a driving force throughout the process of developing this textbook.

I hope that the book serves the purpose of its readers. I retain the responsibility of errors of any kind in the book.

Sanjay Aggarwal
After studying this chapter, you should be able to:
- Understand the concept of relevant Costs.
- Learn the meaning of incremental revenue.
- Know the concept of opportunity gain.
- Solve the problem on cost benefit analysis.

Chapter 1: Relevant Cost

LEARNING OBJECTIVES
Each chapter opens with a set of learning objectives, summarizing what readers should learn from each chapter.

Syllabus

SYLLABI COVERAGE
The book covers the latest syllabi of Advanced Management Accounting for CA finals as issued by ICAI.

Problem Solving Techniques

PROBLEM SOLVING TECHNIQUES
This section covers the best problem solving techniques for costing and operations research problems. This has been drawn from the wide range of author’s experience from industry, academics and teaching CA final students.

EXHIBITS
Each chapter includes exhibits, illustrating the concepts you need to know and the techniques you need to learn.
Notes:

1. Avoid making any conclusion without sufficient data.
2. Relevant cost
3. Sunk costs are not relevant for decision-making.
4. Cost indifference point should be used when preference shifts from one alternative to another.
5. Sunk costs should be ignored, especially in short run.
6. If a company is in liquidation, and there is no prospect that any money will be obtained from the winding up of the company, the entire cost is sunk.

Required:

A common mistake which a student often makes while presenting the information for decision making purpose is to compare the unit cost and unit revenues for decision-making purpose. However, this comparison is not always valid. The relevant cost and revenue will give the correct decision point.

When even in short run, minimum price to be quoted is being considered, then the computations for decision-making must be modified.

Summary:

It will help in recapitulating the chapter and its major concepts at a glance.

Glossary:

A full glossary of advanced management accounting concepts has been provided at the back of the book for quick recap of the important topics discussed throughout.

Problems and Solutions:

Concepts, algorithms and procedures for solving numerical problems have been given in each chapter. Solutions have specially been designed keeping the CA final examinations in mind. It reflects author’s unique and different style of solving Costing and OR problems.

Guided Tour:

These concepts in boxes introduce you to the topics to remember, revise, follow and ground the chapter concepts in real life terms. These points have been drawn keeping CA finals questions being asked in examinations.
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**Guided Tour**

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## SECTION II: OPERATIONS RESEARCH

1. Assignment Problem 1.1–1.73
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**Glossary** G.1–G.8
Syllabus

PAPER 5: ADVANCED MANAGEMENT ACCOUNTING
(ONE PAPER – THREE HOURS – 100 MARKS)

Level of Knowledge: Advanced Knowledge

Objective
- To apply various management accounting techniques to all types of organisations for planning, decision making and control purposes in practical situations.
- To develop ability to apply quantitative techniques to business problems.

Cost Management
- Developments in the business environment; just in time; manufacturing resources planning; (MRP); automated manufacturing; synchronous manufacturing and back flush systems to reflect the importance of accurate bills of material and routings; world class manufacturing; total quality management
- Activity based approaches to management and cost analysis
- Analysis of common costs in manufacturing and service industry
- Techniques for profit improvement, cost reduction, and value analysis
- Throughput accounting
- Target costing; cost ascertainment and pricing of products and services
- Life cycle costing
- Shut down and divestment

Cost Volume Profit Analysis
- Relevant cost
- Product sales pricing and mix
- Limiting factors
- Multiple scarce resource problems
- Decisions about alternatives such as make or buy, selection of products, etc.
Pricing Decisions
- Pricing of a finished product
- Theory of price
- Pricing policy
- Principles of product pricing
- New product pricing
- Pricing strategies
- Pricing of services
- Pareto analysis

Budgets and Budgetary Controls
The budget manual, Preparation and monitoring procedures, Budget variances, Flexible budgets, Preparation of functional budget for operating and non-operating functions, Cash budgets, Capital expenditure budget, Master budget, Principal budget factors.

Standard Costing and Variance Analysis
Types of standards and sources of standard cost information; evolution of standards, continuous improvement; keeping standards meaningful and relevant; variance analysis; disposal of variances.
- Investigation and interpretation of variances and their inter relationship
- Behavioural considerations.

Transfer Pricings
- Objectives of transfer pricing
- Methods of transfer pricing
- Conflict between a division and a company
- Multi-national transfer pricing.

Cost Management in Service Sector

Uniform Costing and Inter Firm Comparison

Profitability Analysis - Product wise/Segment wise/Customer wise

Financial Decision Modeling
- Linear Programming
- Network analysis - PERT/CPM, resource allocation and resource leveling
- Transportation problems
- Assignment problems
- Simulation
- Learning Curve Theory
- Time series forecasting
- Sampling and test of hypothesis
While attempting a question on cost management, it is the most essential to read the requirement of the question carefully.

After reading the requirements of the question, understand clearly whether the requirement is related to decision-making or to profit and loss statement.

If the requirement is related to decision-making we will have to follow relevant cost concept. Decision-making will always show effect on profit ascertained by working out relevant gain and relevant cost.

If the requirement is related to profit and loss statement, we will have to follow total cost concept. Profit and loss statement will always show the profit or loss which is ascertained by working total revenue and total cost.

In some questions, requirements are given by number a, b, c, and so on. In such a case, we should always presume that each and every requirement is independent unless informations are interlinked. Solve these requirements independently with information given in question.

In some questions, it may happen that all informations given in the question are not required to be used at the same time. Some information may be useful in requirement number (b) or (c) or so on. The thought on this information should be given only when we are about to attempt that requirement.
Sometimes several informations given in the question are not required to be used in the light of requirement of the question. We should identify these informations as irrelevant/useless/ baseless and keep ourselves away from them.

We have to follow the instructions given by the management blindly even if the instruction is contrary to our conceptual understanding. Under no circumstances we have any right to disregard the management instructions.

It should always be kept in mind that every information is to be read carefully. Casual approach, idea approach or plain reading is extremely dangerous in most of the cases.

If the question is silent on some point whose interpretation is required for solving the question, we should always follow the most acceptable practice.

Advice/recommendation to the management should be always specific and unconditional but if there appear to be some ambiguity in the information, give the advice/recommendation subject to qualifying remarks.

Presentation can vary from student to student. It is not at all a cause of worry but it has to be ensured that the presentation should be up to acceptable norms (if not the best) with working notes (only essential working notes).

One of the most essential parts while attempting a question on costing is to ensure proper planning. Before we begin solving the paper, entire paper has to be first read carefully so that the proper strategy can be formulated as to how to attempt the paper. Proper planning and selection of right question at right time is the vital key for greater success.

Ensure proper time management through effective planning by choosing the sequence of attempting the question in such a manner so that time management may not go out of control. (For example choosing one lengthy question with some light weight question so that time spent over in one question should be set off against another question). Since the Costing question paper is quite lengthy, it is generally not advisable to target attempting for 100 marks. We should target attempting questions for around 90 marks and put our sincere efforts to achieve the same through proper and effective planning. If we are able to achieve higher than our own designed benchmark, it will be a bonus for us.