# APPLIED MANAGEMENT ACCOUNTING

# STUDY TEXT

**Qualifications and Credit Framework**

**Q2022**

The material in this book may support study for the following AAT qualifications:

AAT Level 4 Diploma in Professional Accounting

AAT Diploma in Professional Accounting at SCQF Level 8

# CONTENTS

# INTRODUCTION

## HOW TO USE THESE MATERIALS

These Kaplan Publishing learning materials have been carefully designed to make your learning experience as easy as possible and to give you the best chance of success in your AAT assessments.

They contain a number of features to help you in the study process.

The sections on the Unit Guide, the Assessment and Study Skills should be read before you commence your studies.

They are designed to familiarise you with the nature and content of the assessment and to give you tips on how best to approach your studies.

## STUDY TEXT

This study text has been specially prepared for the revised AAT qualification introduced in 2022.

It is written in a practical and interactive style:

- key terms and concepts are clearly defined
- all topics are illustrated with practical examples with clearly worked solutions based on sample tasks provided by the AAT in the new examining style
- frequent activities throughout the chapters ensure that what you have learnt is regularly reinforced
- 'pitfalls' and 'examination tips' help you avoid commonly made mistakes and help you focus on what is required to perform well in your examination
- 'Test your understanding' activities are included within each chapter to apply your learning and develop your understanding.

## ICONS

The study chapters include the following icons throughout.

They are designed to assist you in your studies by identifying key definitions and the points at which you can test yourself on the knowledge gained.

### Definition

These sections explain important areas of knowledge which must be understood and reproduced in an assessment.

### Example

The illustrative examples can be used to help develop an understanding of topics before attempting the activity exercises.

### Test your understanding

These are exercises which give the opportunity to assess your understanding of all the assessment areas.

### Foundation activities

These are questions to help ground your knowledge and consolidate your understanding on areas you're finding tricky.

### Extension activities

These questions are for if you're feeling confident or wish to develop your higher level skills.

Quality and accuracy are of the utmost importance to us so if you spot an error in any of our products, please send an email to mykaplanreporting@kaplan.com with full details.

Our Quality Co-ordinator will work with our technical team to verify the error and take action to ensure it is corrected in future editions.

# 1 Activity based costing

## Introduction

Overhead is the general term used to describe costs which are not direct costs of production. They are also known as indirect costs and they may be indirect production costs or indirect non-production costs. Traditionally when a management accountant has been trying to ascertain the cost of a product or service, there have been two approaches for dealing with overheads. The first is absorption costing, which involves apportionment and allocation of all production overheads to arrive at a 'full' cost per unit. The other approach is to use only direct costs to arrive at the cost per unit and leave indirect costs as a general overhead not related to units of output. This approach is known as marginal costing

In this chapter we look at a new technique. Changes in technology and processes mean that some organisations have a much higher proportion of overhead costs now and their management are not happy with the traditional approaches, so an approach called activity based costing has been developed. Read on to find out more.

| ASSESSMENT CRITERIA |
| --- |
| Activity based costing (LO 2.3) |

**CONTENTS**

# 1 Modern production environments

## 1.1 Introduction

Modern manufacturing is different from traditional manufacturing techniques:

(a) much more machinery and computerised manufacturing systems are used

(b) smaller batch sizes are manufactured at the request of customers

(c) less use of 'direct' labour due to the higher use of computers and machinery.

This has had an impact on production costs:

- more indirect costs (overheads)
- less direct labour costs

This means that the traditional methods of costing using Absorption costing and Marginal costing are less useful.

- **Absorption costing** charges overheads to products in an arbitrary way – usually based on the volume of production in units or hours.
- **Marginal costing** values products based on the variable cost to produce them and fixed costs are treated as a period charge. In modern environments the variable costs might be small in comparison to the fixed costs and the fixed cost may not be truly fixed if considering all aspects of the production process.

## 1.2 Criticisms of absorption costs

Historically a direct labour rate for absorption of all fixed overheads was a very common method, as production tended to be highly labour-intensive. Items such as rent would be apportioned using the area involved, but the absorption rate would usually be labour hours. It was reasonable to assume that the more labour time spent on a product, the more production resources in general were being used. Thus a product with a higher labour content should be charged with a higher share of the overheads.

In this example, one solution would be to use machine hours as a basis. However, this still tries to relate all overhead costs, whatever their nature, to usage of one resource. This would not necessarily be appropriate for, say, costs of receiving and checking materials going into the production process. This will be more likely to depend upon the number of times an order of material is received into stores for a particular product.

## Example

Plant Y produces about one hundred products. Its largest selling product is Product A; its smallest is Product B. Relevant data is given below.

| | Product A | Product B | Total Plant Y |
|---|---|---|---|
| Units produced pa | 50,000 | 1,000 | 500,000 |
| Material cost per unit | £1.00 | £1.00 | |
| Direct labour per unit | 15 minutes | 15 minutes | |
| Machine time per unit | 1 hour | 1 hour | |
| Number of set ups p.a. | 24 | 2 | 500 |
| Number of purchase orders for materials | 36 | 6 | 2,800 |
| Number of times material handled | 200 | 15 | 12,000 |
| Direct labour cost per hour | | | £5 |

Overhead costs

| | £ |
|---|---|
| Set up | 280,000 |
| Purchasing | 145,000 |
| Materials handling | 130,000 |
| Machines | 660,000 |
| | 1,215,000 |

Total machine hours are 600,000 hours.

Traditional costing (absorbing overheads on machine hours):

| Unit cost | A | B |
|---|---|---|
| | £ | £ |
| Material cost | 1.00 | 1.00 |
| Labour cost £5 × 15/60 | 1.25 | 1.25 |
| Overhead per machine hour $\frac{1,215,000}{600,000} = 2.025$ | 2.025 | 2.025 |
| | 4.275 | 4.275 |

The above costings imply that we are indifferent between producing Product A and Product B.

Using an ABC approach would show:

Calculate the direct material and labour costs as for the traditional approach.

| Unit cost | **A** | **B** |
|---|---|---|
| | £ | £ |
| Material cost | 1.00 | 1.00 |
| Labour cost | 1.25 | 1.25 |
| | 2.25 | 2.25 |

Calculate the overheads that will be charged to each product by:

(a) Calculating the overhead cost per cost driver for each type of overhead (e.g. cost per set-up).

(b) Charge cost to each unit by calculating the unit cost accordingly.

| | **A** | **B** |
|---|---|---|
| | £ | £ |
| Overheads: | | |
| Set up | | |
| £280,000/500 = £560 per set up | | |
| (£560 × 24)/50,000 = £0.2688 | 0.27 | |
| (£560 × 2)/1,000 = £1.12 | | 1.12 |
| Purchasing: | | |
| £145,000/2,800 = £51.79 per purchase order | | |
| (£51.79 × 36)/50,000 = £0.0372888 | 0.04 | |
| (£51.79 × 6)/1,000 = £0.31074 | | 0.31 |
| Materials handling: | | |
| £130,000/12,000 = £10.83 per time handled | | |
| (£10.83 × 200)/50,000 = £0.04332 | 0.04 | |
| (£10.83 × 15)/1,000 = £0.16245 | | 0.16 |