



A Foundation in Business Accounting

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Preface

Accountancy education has made considerable progress over recent years and the emphasis has moved from 'how?' to 'why?'. In this text we have attempted to combine the theory with the practical in order to give not only a mechanical ability but a fuller appreciation of the whole subject. In order to achieve this we have been selective in the topics we discuss, concentrating on those which we feel are fundamental to the understanding of the subject as a whole. Where possible we have used an example which continues stage by stage through a topic and have attempted to use a layout which would show as simply as possible the technique or problem being illustrated. Throughout the text we have emphasised the effect on the flow of funds through the business and not merely the effect of profits.

The text is specifically intended for students of accountancy at undergraduate level and students of accountancy foundation courses or similar professional examinations. It will also be useful for those who have a basic understanding of the subject but who wish to improve their knowledge of the theory and ability in the practical application. At the end of each chapter are graded questions which bring out the main points of a topic without including extraneous matters liable to cause confusion.

The chapters fall into seven main areas of study. Chapters 1–5 introduce accounting techniques and their effects on the balance sheet and income statement. Chapter 6 introduces the law and accounting requirements for partnerships. Chapters 7–9 cover accounting for limited companies. Particular problems of capital gearing and share valuations are highlighted. Amalgamations lead to consolidated accounts and these have been set out in a way which, it is hoped, will clarify this difficult topic. Chapters 10–13 cover budgetary control and costing viewed as an integral part of business management, and emphasis is given to the relationship of the individual parts of the operation to the whole company plan. Chapter 14 covers the legal and professional standards required for company accounts, incorporating the treatment of taxation. Chapter 15 looks at the interpretation of accounts with a view to understanding the purpose of and not merely the ability to calculate ratios. Finally the Appendix includes various diagrams and charts to illustrate topics covered by the text and business information systems.

Our thanks are extended to Cadbury Schweppes Ltd and Rediffusion Ltd for their advice and assistance on current industrial accounting techniques; to our colleague, J. Lewis Brown, MSc, FCMA, for his reading of, and comments on, the script; and to Mrs Elizabeth Johnson and Mrs Sybil Austin for the typing.

Kingston on Thames, 1977

A.A.C.
M.J.R.

CHAPTER 1

The Role of Accountancy in Business

Every business operation and most wealthy individuals have found it necessary to record in some way a measure of their wealth. In earlier times the wealth would have been measured in a convenient unit such as 'heads of cattle' or 'area of land'. Eventually the means of measurement became currency. With the need to record wealth and the establishment of a standard unit of measurement a system of accounting became necessary.

Accountancy incorporates four major function areas: (1) communication; (2) measurement; (3) control; and (4) decision-making.

Communication

Accountancy as a means of communication involves the submission of reports, written or verbal, to various bodies. The external report is made to those who have an interest in the business operation but who have no hand in its management. This includes such diverse interests as tax collectors and shareholders, as well as the owners of the business. In recent years considerable controversy has arisen as to how much information should be given to those external interests. Since 1830 governments have passed legislation to force limited companies to disclose certain information to their shareholders. However, events have shown that the kind of information provided may not be of much help to the user. Similarly employees and unions have suggested that they should be given information concerning future employment prospects and the company's trading intentions. Also certain sections of the community have suggested that society as a whole should be aware of the way in which companies use cheap labour abroad or are responsible for pollution.

To express the above in financial terms may not be possible but the fact that a business may be accountable for these matters could well force accountancy into the area of having to give reports on them.

Within an organisation it is necessary to report on the way the business is functioning and this is often done through the use of internal reports. Once company objectives have been established they are measured against actual results and any variance reported, in order that decisions and corrective action may be taken.

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The need for internal reports arises as a result of the increase in the size of the organisation and the necessity for management to be kept informed when they are not controlling routine matters. Another type of internal report is the budget based on the company objectives. This is prepared after detailed discussions and investigations within those areas which will determine the size and type of operation to be undertaken, e.g. market trends, production capacity and availability of finance.

When a business intends to start a new product line or acquire new plant and machinery it may commission a special report to analyse the potential of the project, to compare it with alternatives and to recommend a course of action to the management. These reports would not only look merely at the immediate profit but would consider implications in other areas such as possible over-manning and labour disputes.

Using reports as a means of communication involves an accountant not only in the task of collecting and recording data but in making value judgement in using the information; it is this latter area in which the student will need to use all forms of information and will require an interpretative capacity to be successful.

Accountancy is a much larger area than accounts if these are merely the means of recording data. It is, however, necessary to fully understand the system of data recording in order to appreciate exactly what the results indicate. Even more important, it will help in the understanding of what the system and results do not purport to do.

Measurement

At first, accountancy through the use of accounts acted as a measure of wealth based on the original cost of an object. Later it developed into measuring efficiency of operation and performance.

The means of measurement is the standard unit of currency and provided that the unit of currency remains constant changes in wealth can be easily measured. The method of measurement has tended to involve two distinct parts – the money invested in the business (capital) and the money generated through a trading operation (revenue). For many years accountants and lawyers have debated the difference and definitions of capital and revenue. Generally speaking taxation was levied on revenue (a recurring item) and not on capital.

In order to establish accuracy of measurement, detailed accounts are kept in the form of ledgers. Every transaction is recorded and analysed into convenient categories.

The existing method of data recording can be traced back to Italy in the thirteenth century and, in particular, to the great trading areas of Florence, Venice and Genoa. The terms 'debit' and 'credit', which will be explained in Chapter 2, can be traced back to this period. Luca Pacioli (c.1445–1515) first wrote about the system of double-entry book-keeping in 1494. Since that time many texts have expanded the system and added to the techniques. Until recent years many believed that accountancy and book-keeping were synonymous.

In the past few years one of the basic requirements of this system of data recording has become less certain, namely that the unit of measurement remains constant. Inflation has until recently been relatively slow; however in the past few years this has not been the case and, as a result, the unit of measurement has itself been changing in real value. Thus by continuing to use a variable unit of measurement, changes in wealth cannot be easily isolated from the changes in the unit of measurement. There are at present several systems of reviewing this change caused by inflation, some more fundamental to book-keeping than others. It is not our intention to discuss these in detail but whichever system is used will mean that the accountancy profession will have to consider much more the fundamental purpose of the subject and not merely the mechanics of how to record it.

Control

One aspect of accountancy which is again based on the historic development of the subject is its use as a means of control. Where a business has its operation spread over many sites, perhaps throughout the country, it uses accounts to record the value of such assets as stock which the branch ought to have. Similarly its accounting operation may be so divided that it requires special accounts to be created in order to control the total amount of the debtors or creditors. Depending on the type of business and its operation, the accountant in the firm will create these controls to suit the needs of the business.

One point that each of these accounts has in common is that they are based on the system of book-keeping.

When the first limited companies were created in 1830 for the collection of capital in order to build railways, it was necessary to protect the investment of the shareholders and the creditors. Shareholders were divorced from management and this was a trend which continued throughout the nineteenth and twentieth centuries. As a result of a procession of fraudulent transactions, causing loss of shareholders' and creditors' money, it became necessary to introduce legislation to protect the shareholders and creditors, and this was policed by an audit. Originally the auditor was one of the shareholders, but later, as the accounts and types of fraud became more complicated, it became necessary for those with a knowledge of accounts to become involved. Eventually the auditor became an independent agent on behalf of the shareholders.

The accountancy profession developed into two basic streams, that of the auditing profession and that of those who work within industry and commerce. The professional accounting bodies have, since their inception in the nineteenth century, tried to regulate the standards of their members and act as advisers to government in the formulation of requirements. In recent years, through the Statements of Standard Accounting Practice, they have set standards which regulate the way information is given to shareholders.

Accountancy as a means of control is thus exercised by the creation of book-keeping records and legislation and by the standing of the professional body to act as independent witness and carry out an audit function.

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The following statements are typical reports by auditors indicating their attempts to control the accuracy of information presented to shareholders. Statements 2, 3 and 4 contain reservations on certain matters in the accounts and are known as qualified audit reports.

- (1) In our opinion, the accounts set out on pages . . . to . . . give a true and fair view of the state of the company's affairs at . . . and of its profit (or loss) for the year ended on that date and comply with the Companies Act 1948 and 1967.

Signed

- (2) We have examined the accounts of . . . Ltd and in the absence of adequate analysis of factory wages we are unable to verify the charge for labour and overhead amounting to £ . . . included in the additions of £ . . . to plant and machinery during the year.

Subject to the foregoing reservations the accounts set out on pages . . . to . . . in our opinion give a true and fair view of the state of the company's affairs at . . . and of its profits for the year ended on that date and comply with the Companies Act 1948 and 1967.

Signed

- (3) We have examined the accounts set out on pages . . . to . . . and find that certain stocks valued at £ . . . in the account are located in . . . and are at present unrealisable because they appear to have been sequestered by the government of that company. It is uncertain whether they will be realisable by the company at the amounts stated, if at all, and for this reason we are unable to form an opinion whether the accounts give a true and fair view of the company's affairs at . . . and of its loss for the year ended on that date.

In all other respects the accounts comply with the Companies Act 1948 and 1967

Signed

- (4) We have examined the accounts set out on pages . . . to . . . and found that the shares in P.Q. Ltd, which is in liquidation, are shown in the Balance Sheet at a cost of £ The liquidator has stated that it is unlikely that the company will be able to pay its debts in full. For this reason the accounts, in our opinion, do not give a true and fair view of the state of the company's affairs at . . . and of its profit for the year ended on that date.

Signed

Decision-making

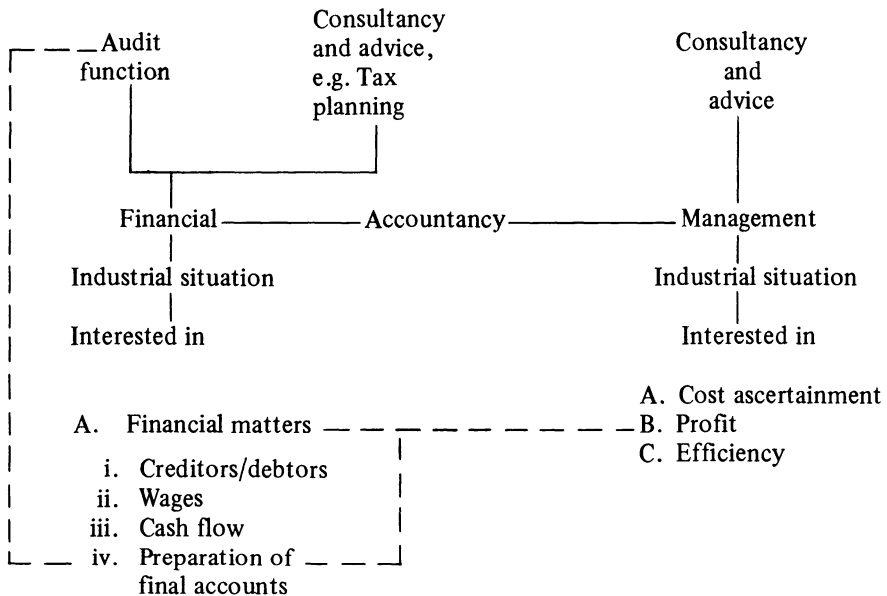
As a result of activities information is communicated on a basis of a standardised system of measurement and results in information which can be relied on when making decisions.

Decisions of management can be improved by a system of reporting only the exceptions from known objectives. These reports will include figures, not as an end in themselves but merely to quantify a problem area to show its relative significance. Similarly shareholders are given information on which to base their investment decisions. These reports will include the annual audited accounts and also statements by the chairman and directors.

Creditors may use published accounting information to decide whether or not to advance goods on credit and the extent of the credit.

Although accountancy has in the past been used to report historic events, the tendency in recent years has been to develop the subject into forecasting a more dynamic area of activity. It will be necessary, however, to look in detail at the basic system of accountancy and in particular at the book-keeping system, remembering at all times the purpose for which the data are being recorded (see figure 1.1).

Figure 1.1



The Business

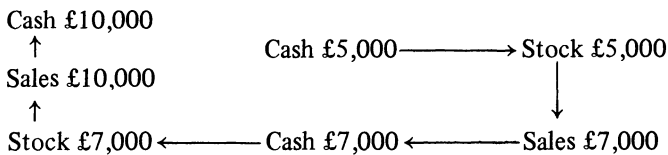
The first basic concept on which accountancy is based is that a business is treated as being completely separate from the owner or proprietor, even if the business is completely owned by the proprietor.

When a business is started by the proprietor investing his private funds in it, these funds become the funds of the business and an accounting system is then necessary to indicate to the proprietor the manner in which they have been used and how additional funds have been obtained. To express the matter in another way, the funds invested by the proprietor represent his interest in the business and the accounting system indicates the return earned for the proprietor on his investment by way of profit arising from certain transactions.

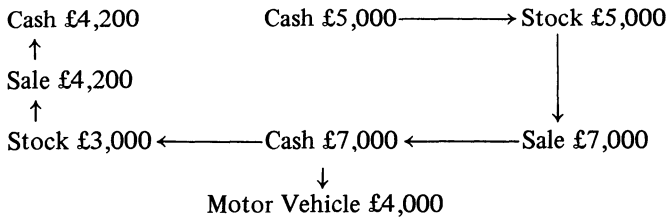
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'Funds' is a term used in accountancy to mean any source of finance. There are several sources of funds available to a proprietor of a business or a person about to start a business: (1) the personal resources, cash or assets he already possesses; (2) a sympathetic bank manager who will give him a loan or overdraft; (3) suppliers who are willing to give him a period of credit before asking him for payment; (4) profit generated by selling goods or services at a price greater than the total cost of providing those goods or services.

Once the funds have been invested in the business they will change their form many times. For example, a business may commence with cash, which is then used to buy stock of goods which in turn are sold, producing cash again. The sale of stock at a price greater than the original cost will result in an increase in the business assets, specifically cash. With these increased assets it is now possible to purchase a greater quantity of stock, or other assets. In this way the business expands without the proprietor having to introduce additional capital:



After four transactions, two purchases and two sales, the cash resources have increased 100%. If any part of the cash after the first sale had been utilised for the purchase of a motor vehicle for use in the business and not for resale, subsequent growth would have been limited to the profit earned on a smaller stock:



The business has earned £3,200 in profit after two sales but cash resources have decreased by £800 from the original balance as a result of investing the profit in the business.

It is this continual turnover and utilisation of the funds of a business which give rise to the need for accounting records.

'A' decides to start a small business trading in electrical goods and has the following assets which he intends to use in the firm:

Cash in Hand	200
Cash at the Bank	4,000
	£4,200

£4,200 represents his interest in the business. If 'A' loses any of the cash his interest will be reduced by the same amount. This can be explained by the equation

$$\text{Proprietor's Interest} = \text{Net Assets}$$

This is a fundamental of accountancy, and even though at later stages greater analysis is given to each side of the equation, its root is the same. The equation is normally expressed numerically and the previous example would be written as follows:

Net Assets:	Cash at Bank	4,000
	Cash in Hand	200
		<hr/>
		£4,200
		<hr/>
Proprietor's Interest:		
	Original Capital	£4,200
		<hr/>

This statement displayed is known as a Balance Sheet and is one of the best-known accounting statements. The effect on the proprietor's interest should be considered as a result of the following transactions:

<p>I</p> <p>The business buys raw materials and pays £500 by cheque for them. The payment out of the bank and the purchase of stock does not affect the total assets of the business, it merely converts one asset, cash, into another, stock.</p>	<p>II</p> <p>A piece of machinery is purchased at a cost of £1,000 and is paid for by cheque. The purchase of machinery is exactly the same type of transaction as the purchase of stock and does not affect the total assets. The only difference is the future use. The machinery will be retained for an indefinite period while the stock will be sold in the immediate future.</p>	<p>III</p> <p>The proprietor withdraws £50 of cash from the business for his own personal use. The withdrawal of cash from the business by the proprietor is a reduction in the assets of the firm as no other assets were acquired to replace it. The proprietor's interest in the business is therefore similarly reduced from the original £4,200 he invested to £4,150 which remains. This type of transaction is described as Drawings and refers to the removal from the business of assets taken by the proprietor for his personal use.</p>	<p>IV</p> <p>Having made some goods from half the raw material stock purchased, these are sold for £600 cash. The sale of the stock for cash has two effects on the assets of the business (a) the stock is reduced by half to £250, since that amount left the business: (b) the cash in hand is increased by £600, the proceeds of the sale of stock. The assets of the business have therefore risen by an income of £600 - outgoings £250 = net increase £350. A similar increase in the proprietor's interest must also take place, represented by the increase arising from the trading transactions. Such increases are termed 'Profits'.</p>	<p>V</p> <p>The cash in hand is reduced to £25, £725 being paid into the bank. The transfer from cash in hand to the bank has no effect on the total assets of the business and like the first transactions is only an exchange of one asset for another. The Balance Sheet after each of the transactions would appear as displayed.</p>
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Balance Sheet of 'A'

	Original	(I)	(II)	(III)	(IV)	(V)
Equipment	—	—	1,000	1,000	1,000	1,000
Cash at Bank	4,000	3,500	2,500	2,500	2,500	3,225
Cash in Hand	200	200	200	150	750	25
Stock	—	500	500	500	250	250
Net Assets	<u>£4,200</u>	<u>£4,200</u>	<u>£4,200</u>	<u>£4,150</u>	<u>£4,500</u>	<u>£4,500</u>
Proprietor's Interest	4,200	4,200	4,200	4,200	4,200	4,200
Capital	—	—	—	—	350	350
Profits	—	—	—	4,200	4,550	4,550
Less Funds Withdrawn	—	—	—	50	50	50
	<u>£4,200</u>	<u>£4,200</u>	<u>£4,200</u>	<u>£4,150</u>	<u>£4,500</u>	<u>£4,500</u>

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From these transactions certain fundamental statements can be made:

(1) When a business is started it is treated completely separately from the proprietor's personal assets and his interest in the business equals exactly the assets of that business.

(2) Where funds leave the business but are replaced by other assets of an equal value, the total assets will remain the same as will the proprietor's interest. However, where they are replaced by an asset of a different value then a change will occur in the proprietor's interest. If replaced by an asset of greater value the proprietor's interest is increased. Where an asset is replaced by one of smaller value the proprietor's interest is reduced.

(3) Where assets are withdrawn from the business, often known as an outflow of funds from the business, and not replaced by other assets then a reduction will occur in the proprietor's interest.

'B' decided to start a business trading in office equipment and acquired premises, paid for from his own money, for £8,000. He spent a further £1,500 on fixtures and fittings for the premises and put £100 of cash into the till on the first day of trading. The following transactions took place (see displayed Balance Sheet of 'B'):

A debtor is someone who owes the business money.

A creditor is someone to whom money is owed by the business.

The effect of the transactions is now considered but first it should be understood that:

(1) A creditor is a liability or negative asset, as it is a legally enforceable promise to pay cash from the assets of the business in exchange for goods or services received.

(2) A debtor is an asset of the business, as this is a legally enforceable claim by the business on the assets of the person or firm to whom the goods were sold.

Creditors for goods or services are often described as liabilities; other liabilities would include amounts owing by the business for taxation, loans from people other than the proprietor and, in the case of a limited company, dividends due to be paid to shareholders. The creation of liabilities also gives rise to third parties with interests in the business funds, in addition to the proprietor.

The Balance Sheet illustrated also shows one of the usual business problems, that of being unable to pay the creditors until funds have been obtained from the debtors. This may in some circumstances lead to difficulties, as creditors may not be prepared to supply further goods until previous deliveries are paid for. Funds must therefore be obtained from other sources such as bank overdrafts. It will also be seen that although the proprietor has earned £1,000 profit he is not able to withdraw his profit from the business due to the lack of cash.

Examination of the two examples shown will give an indication of the considerable movement in the assets and liabilities of a business, even though very few

I The business bought, on credit, stock for £800. This transaction does not alter the total net assets of the business but creates a liability in the form of a creditor for unpaid stock.

II 25% of the stock was sold on credit terms for £1200. The sale of 25% of the stock gives rise to an outflow of assets of £200, replaced by an inflow in the form of a debtor of £1200, giving an increase in the assets of £1000. This increase is reflected by an increase in the Proprietor's Interest.

III The debtor paid him £850 by cheque.

IV The supplier was paid £700 by cheque. The settlement by debtors (III) and of creditors (IV) by payment has no effect on the total net assets of the business.

V 'B' withdrew £50 of cash for personal expenses. The withdrawal of cash by the proprietor causes a reduction in the assets and also his interest in the business.

Balance Sheet of 'B'

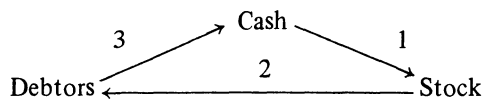
Original	(I)	(II)	(III)	(IV)	(V)
Premises	8,000	8,000	8,000	8,000	8,000
Fixtures and Fittings	1,500	1,500	1,500	1,500	1,500
Stock	800	600	600	600	600
Debtors	-	1,200	350	350	350
Cash:	-	-	850	150	150
In Bank	100	100	100	100	50
In Hand	-	-	-	-	-
Less Creditors	10,400	11,400	11,400	10,700	10,650
	800	800	800	100	100
	£9,600	£10,600	£10,600	£10,600	£10,550
Capital	9,600	9,600	9,600	9,600	9,600
Profit	-	1,000	1,000	1,000	1,000
Less Drawings	-	-	-	-	10,600
	£9,600	£10,600	£10,600	£10,600	50
					£10,550

transactions have taken place, and it is for this reason that a system of book-keeping is necessary in order to control the day-to-day operations in view of the impossibility of preparing a Balance Sheet after each transaction to discover the changes in the state of the business.

Fixed Assets and Current Assets

It will have been observed that certain assets of the business were changed frequently as a result of trading operations. Such assets are referred to as 'Current Assets'. Current assets include such items as stocks of raw materials, work in progress and finished goods, debtors, cash in hand and bank balances. These assets are utilised on a day-to-day basis for the purpose of trading and generating profits.

The completion of the trading cycle below should result in an increase in the assets of the business which will be reflected by a similar increase in the proprietor's interest.



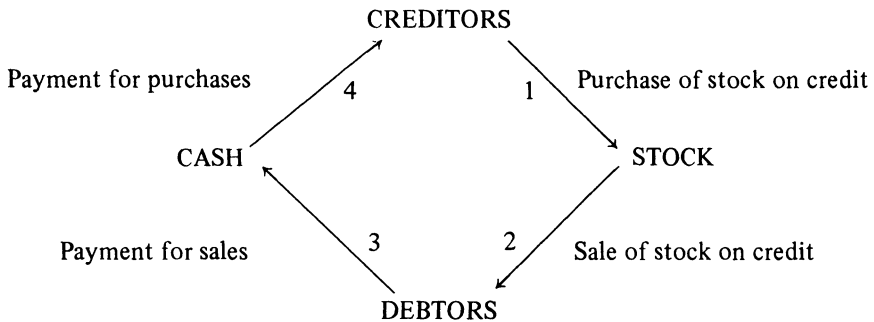
Assets not used for trading operations are referred to as 'Fixed Assets'. These would include land, buildings, plant and machinery, vehicles, investments and office fixtures and fittings. These assets, though used on a day-to-day basis, are not utilised for the purpose of trading and will only be sold when they are of no further use to the business.

In order to decide whether an asset should be classified as Current or Fixed it is necessary to know the trading operations of the business. For example, the manufacturer of motor vehicles will treat his stock of completed vehicles as a current asset, as these will be disposed of through trading. The vehicle used by the manufacturer for the delivery of completed stocks and spares will be treated as a fixed asset because it is not intended for resale.

Liabilities

Amounts owed by the business to parties other than the proprietor are known as 'Liabilities', which are differentiated as 'Current Liabilities' or 'Long-Term Liabilities'.

Current liabilities arise as a result of normal trading activities and include creditors and bank overdrafts. In the case of limited companies they also include Taxation and Proposed Dividends. Current liabilities are settled from the cash generated by sales.



Long-term liabilities arise through the proprietor obtaining finance from other parties for the expansion of the business. The repayment of these liabilities is not required in the immediate future. This can be recognised by the fact that they carry a fixed rate of interest and are usually repayable on a fixed date.

Proprietor's Interest

The Proprietor's Interest is analysed between Capital and Retained Profits. The capital is the amount originally invested in the business together with additional funds subsequently placed in the business. Retained profits are the amount of the increase in the assets as a result of trading operations, less any funds withdrawn by the proprietor for his personal use.

The withdrawal of funds may also be from the capital and both these forms are described as drawings.

The equation stated earlier can now be expanded as follows:

$$\begin{aligned} \text{Proprietor's Interest} &= \text{Net Assets} \\ \text{Capital} + \text{Profits} - \text{Drawings} &= \text{Fixed Assets} + \text{Current Assets} - \text{Liabilities} \end{aligned}$$

Analysis of Profit

Having prepared a Balance Sheet the proprietor will know that profit has been earned as a result of trading operations, but he will not know the details of how such profit arose. These details will be supplied by means of an Income Statement analysing the figure of profit on the Balance Sheet.

The Income Statement will show details of sales, the cost of those sales and the expenses incurred in the running of the business.

In the Balance Sheet of 'B' a profit of £1,000 was shown as a result of selling goods which had cost £200. This apparent profit has taken no account of expenses which may have been incurred. These expenses would cover items such as delivery charges, administrative costs and other incidental expenses.

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'C' started a business and the following transactions took place:

- (i) Purchase of stock for resale £2,000
- (ii) Sold 80% of stock for £4,000
- (iii) Paid expenses: wages £350
 rent £400
 advertising £250

It should be appreciated that these are isolated transactions. As the trader has not sold the whole of his stock he must have 20% remaining as an asset, the cost of which must be 20% of £2,000, i.e. £400. When preparing an Income Statement it is usual to calculate a 'Gross Profit' figure which is the difference between the cost of the goods sold and the revenue earned from those sales. The gross profit figure gives an indication of the efficiency of the trading function of the business and generally speaking should remain constant. The expenses of managing the business are then deducted from the gross profit to give a 'Net Profit', which is the increase these transactions have caused to the proprietor's interest. A similar increase will also have taken place with the assets of the business.

Income Statement of 'C'

				%
Sales			4,000	100
Less	Purchases	2,000		
	Less remaining stock	<u>400</u>		
	Cost of goods sold		<u>1,600</u>	<u>40</u>
	<i>Gross Profit</i>		2,400	60
	Less Expenses:			
	Advertising	250		
	Rent	400		
	Wages	<u>350</u>		
			<u>1,000</u>	<u>25</u>
	<i>Net Profit</i>		<u>£1,400</u>	<u>35</u>

Accounting Conventions

Over a period of time various accounting methods have evolved and these have been standardised by the accounting profession into particular conventions. This standardisation ensures that accounting information is presented in a manner that enables comparisons to be made between financial periods or businesses. These conventions attempt to eliminate differences arising as a result of differing methods of calculation having been used, and are referred to as: (1) matching or accrual; (2) consistency; (3) prudence or conservatism.

The Concept of Matching

This concept requires that revenue is matched against the cost of earning that revenue.

In the Income Statement of 'C' the revenue from sales (£4,000) was matched against costs of goods sold (£1,600), together with management expenses of £1,000.

The Concept of Consistency

This concept requires that the same methods are employed from one accounting period to another in order that the results obtained are comparable, and any changes are due to economic factors and not merely due to changes in methods of calculation. In the case of stock valuation, for example, the recognition of what constitutes costs in one financial period must be followed by similar considerations in subsequent periods.

The Concept of Prudence

This concept requires that revenue is taken into account only when there is a certainty that it has been earned. However, expenses should be accounted for as soon as the business becomes aware of them. The concept is primarily concerned with the adoption of a conservative attitude. Revenue from the sale of stock is only recognised when the property of the goods has passed to the buyer.

A business should not recognise profit before it is actually earned but provision must be made for all foreseeable losses.

These concepts are applied as follows. 'D' has been in business for a number of years; the Income Statement and Balance Sheet of the business appeared as follows:

<i>Income Statement of 'D'</i>			<i>Balance Sheet of 'D'</i>		
Sales		7,500	Fixed Assets		5,450
Less	Cost of Sales:		Current	Assets:	
	Opening Stock	1,700		Stock	1,500
	Purchases	2,800		Debtors	1,250
				Cash	300
					<u>3,050</u>
	Closing Stock	<u>1,500</u>	Less Creditors		<u>500</u>
		<u>3,000</u>			<u>2,550</u>
Gross Profit		4,500			<u>£8,000</u>
Less	Expenses:		Capital		6,775
	General	1,375	Profit		1,225
	Rent	900			
	Rates	<u>1,000</u>			
		<u>3,275</u>			
		<u>£1,225</u>			<u>£8,000</u>

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The charge of £900 rent covered a period of nine months from the beginning of the financial year and the charge of £1,000 rates covered a period of fifteen months from the beginning of the financial year.

The trader considered that his closing stock could be sold for £3,750 but he had no known customers.

In order to comply with the matching concept it will be necessary to adjust the charges for Rent and Rates so that a twelve-month charge is included in this accounting period of twelve months. The rent and rates are calculated as follows:

<i>Rent</i>			<i>Rates</i>		
		mths.			mths.
Paid	900	9	Paid	1,000	15
Due	300	3	Less Not due	200	3
Income	<u> </u>		Income Statement	<u> </u>	
Statement	<u>£1,200</u>			<u>£ 800</u>	

(1) The increase in the charge for rent creates an additional liability in respect of the period for which the premises were occupied but not paid for by the end of the accounting period. Such items are known as 'Accruals'.

(2) The reduction in the charge for rates creates an additional asset in respect of the period for which the premises have been paid for but not yet occupied. A claim for repayment could be made if the premises were vacated before the expiration of the three-month period. Such items are known as 'Prepayments'.

(3) In the absence of other information it can be assumed that the closing stock has been calculated in a manner consistent with the calculation of the opening stock.

(4) The trader's assumption that he will be able to sell his remaining stock has been ignored, as not to do so would be to anticipate profits which have not, and may in fact never, be earned. Even if customers were known the future sales would still be ignored because there could be a breakdown in the negotiations.

The redrafted Income Statement and Balance Sheet are as follows:

<i>Income Statement</i>			<i>Balance Sheet</i>		
Sales	7,500	100	Fixed Assets		5,450
Less Cost of Sales:			Current Assets:		
Opening Stock	1,700		Stock	1,500	
Purchases	<u>2,800</u>		Drs.	1,250	
			Rates	<u>200</u>	
	4,500			1,450	
Less Closing Stock	<u>1,500</u>		Cash	300	
	3,000	40		<u>3,250</u>	
<i>Gross Profit</i>	4,500	60	Less: Crs.	500	
			Rent	<u>300</u>	
Less Expenses:					
General	1,375			800	
Rent	1,200			<u>2,450</u>	
Rates	<u>800</u>			£7,900	
	3,375	45			
	<u>£1,125</u>	<u>15</u>	<i>Capital Profit</i>	6,775	
				<u>1,125</u>	
				<u>£7,900</u>	

Effect on Profit of Stock Valuation

In order to obtain details of the stock level at the end of a financial period it is necessary that a physical verification be undertaken or that records of the stock movement be maintained. Having summarised the stock by product type, a valuation must then be placed upon each type of stock. This valuation is critical, since it will directly affect the gross profit as is shown in the following illustration.

It is essential when valuing stock that the concept of prudence be adopted, and for this reason the valuation would normally be the lower of cost or net realisable value. Net realisable value is the expected revenue on the sale of an item. Problems arise, however, as to whether stock is considered as a whole or whether the individual types are valued separately.

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<i>Stock type</i>	<i>Cost</i>	<i>Net Realisable value</i>	<i>Lowest value</i>
W	1,000	2,000	1,000
X	3,000	5,000	3,000
Y	2,500	500	500
Z	5,000	9,000	5,000
	<u>£11,500</u>	<u>£16,500</u>	<u>£9,500</u>

Income Statement

Sales		50,000	50,000	50,000
Less: Cost of Sales				
Opening Stock	9,000	9,000	9,000	
Purchases	<u>31,000</u>	<u>31,000</u>	<u>31,000</u>	
	40,000	40,000	40,000	
Less Closing Stock	<u>11,500</u>	<u>16,500</u>	<u>9,500</u>	
	28,500	23,500	30,500	
<i>Gross Profit</i>	<u>£21,500</u>	<u>£26,500</u>	<u>£19,500</u>	

If the stock is considered in total the most prudent value is that of cost (£11,500). However, if the individual items of stock are valued there may be items the resale value of which is lower than the original cost. In this case the net realisable value of the item will be adopted as in the case of item Y (£500). The adoption of the lower of cost or net realisable value for individual items will give the lowest and therefore more prudent valuation (£9,500).

The use of the cost method, whilst ensuring that no profit is taken until earned, does not ensure provision has been made for possible losses, as in the case of item Y. The use of the lower of cost or net realisable value does ensure that such losses are charged in the financial period in which incurred.

If the net realisable value is used this gives rise to a profit which has not yet been earned and in fact may not arise. The Income Statement would show an inflated value of profit matched by an inflated value of stock, and no additional funds would have been created. In a future accounting period, if the goods are sold at this price, no profit would be shown because the valuation of the opening stock, the closing stock of the previous period, would have the same value as the sales.

One of the problems of stock valuation is in determining exactly what constitutes cost. In a manufacturing business the cost of raw materials and productive labour is easily recognisable but should any recognition be taken of incidental charges such as transportation and handling, duties and taxes and the overheads of rent and rates, light and heat, among others?

The standard recommendation (SSAP9) is that cost constitutes:- original cost of purchase, carriage and storage, import duties and production overheads, whilst allowances consisting of trade discounts, rebates for bulk purchases and subsidies can be deducted.

No addition is to be made for selling, distribution or administration expense.

In order to prevent the proprietor withdrawing all the funds generated a charge is made in the Income Statement so that the cost of the original asset is apportioned over its estimated life. This charge is known as 'Depreciation.'

Depreciation is an attempt to arrive at the cost of using the fixed assets of the business by apportioning the original cost over the estimated life of the particular assets. An item of expense will appear in the Income Statement but the business has not incurred a cash outlay. This arose when the fixed asset was originally purchased. The charge for depreciation ensures that profits are retained in the business and not withdrawn by the proprietor.

The funds represented by the retained profit need not necessarily be in the form of cash but may be converted into other assets, such as investments, which can be realised when the necessity for replacement of the original asset arises. At the same time the management of the business has to understand that in times of inflation the cost of replacement will be greater than the original cost and additional funds will have to be set aside to meet this increased cost.

The following Balance Sheets illustrate the effect of withdrawing all profit as compared with retaining profits by way of depreciation.

Balance Sheets

	I	II	III	IV
Fixed Assets	5,000	5,000	5,000	5,000
Less Depreciation	—	—	1,000	1,000
	<u>5,000</u>	<u>5,000</u>	<u>4,000</u>	<u>4,000</u>
Current Assets				
Cash	2,000	—	—	1,000
	<u>£7,000</u>	<u>£5,000</u>	<u>£4,000</u>	<u>£5,000</u>
Capital	5,000	5,000	5,000	5,000
Profit	2,000	2,000	2,000	2,000
Less Depreciation	—	—	1,000	1,000
			<u>1,000</u>	<u>1,000</u>
Drawings	—	7,000	6,000	6,000
	<u>—</u>	<u>2,000</u>	<u>2,000</u>	<u>1,000</u>
	<u>£7,000</u>	<u>£5,000</u>	<u>£4,000</u>	<u>£5,000</u>
Original Balance Sheet		All funds generated by profits have been withdrawn and there are no funds for the replacement of Fixed Assets	Available funds withdrawn, ignoring the fact that there is only £1,000 of profit available after Depreciation.	Drawings are made from available profit which therefore leaves funds for the replacement of Fixed Assets

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P.W. had been in business for a number of years and the Balance Sheet appeared as follows:

Balance Sheet as at 1 January

	Cost	Depn.	
Fixed Assets: Land and Buildings	8,000		8,000
Plant and Machinery	7,500	1,300	6,200
Motor Vehicles	2,500	1,900	600
	<u>£18,000</u>	<u>£3,200</u>	<u>£14,800</u>
Current Assets: Stock		3,500	
Debtors		4,200	
Cash at Bank		1,900	
		<u>9,600</u>	
Less Liabilities: Creditors		<u>4,300</u>	
			5,300
			<u>£20,100</u>
Capital			10,000
Retained Profits			10,100
			<u>£20,100</u>

An analysis of his Bank Statement at 31 December showed the following:

<i>Receipts</i>		<i>Payments</i>	
Received from Debtors	3,600	Paid to Creditors	2,000
Cash from Sales	25,000	Purchases of Stock for cash	15,000
New Capital Introduced	3,000	Wages	5,000
		Advertising	6,000
		Stationery	200
		Sundry Expenses	700
		Drawings	2,500
		9 mths. Rent from 1 Jan.	900
		15 mths. Rates from 1 Jan.	500
	<u>£31,600</u>		<u>£32,800</u>

£8,000 of stock still remained in the business.

£9,000 of goods had been sold on credit.

£4,500 of goods had been bought on credit.

Depreciation was to be provided for Plant and Machinery £750; Motor Vehicles £150.

See pages 22 and 23 for Balance Sheet.

Balance Sheet

	<i>Original Balance Sheet</i>	I <i>After Receipts</i>	II <i>After Payments</i>
<i>Fixed Assets</i>			
Land and Buildings	8,000	8,000	8,000
Plant and Machinery	6,200	6,200	6,200
Motor Vehicles	600	600	600
	<u>14,800</u>	<u>14,800</u>	<u>14,800</u>
Stock	3,500	3,500	3,500
Debtors	4,200	600	600
Prepayments	—	—	—
Cash	1,900	33,500	700
	<u>9,600</u>	<u>37,600</u>	<u>4,800</u>
Less: Creditors	4,300	4,300	2,300
Accruals	—	—	—
	<u>5,300</u>	<u>33,300</u>	<u>2,500</u>
	<u>£20,100</u>	<u>£48,100</u>	<u>£17,300</u>
Capital	10,000	13,000	13,000
Profit retained	10,100	10,100	10,100

<i>Income Statement</i>			
Sales: Cash	25,000		25,000
Credit	—		—
	<u>25,000</u>		<u>25,000</u>
Opening Stock			—
Purchases: Cash		15,000	
Credit		—	
		<u>15,000</u>	
Closing Stock		—	
<i>Cost of sales</i>			<u>15,000</u>
<i>Gross profit</i>	<u>25,000</u>		<u>10,000</u>
Expenses		6,000	
Wages		5,000	
Stationery		200	
Sundry		700	
Rent		900	
Rates		500	
Depreciation		—	
		<u>13,300</u>	
<i>Net profit</i>		<u>25,000</u>	<u>(3,300)</u>
Less: DRAWINGS		48,100	19,800
		—	2,500
	<u>£20,100</u>	<u>£48,100</u>	<u>£17,300</u>

III <i>After Stock and Credit Transactions</i>		IV <i>After Accruals, Prepayments & Depreciation</i>		
		<i>Cost</i>	<i>Depn.</i>	
	8,000	8,000	—	8,000
	6,200	7,500	2,050	5,450
	600	2,500	2,050	450
	<u>14,800</u>	<u>18,000</u>	<u>4,100</u>	<u>13,900</u>
8,000			8,000	
9,600			9,600	
—			100	
700			<u>700</u>	
<u>18,300</u>			<u>18,400</u>	
6,800		6,800		
—		300		
	<u>11,500</u>		<u>7,100</u>	<u>11,300</u>
	<u>£26,300</u>			<u>£25,200</u>
	13,000			13,000
	10,100			10,100

25,000		25,000	
<u>9,000</u>		<u>9,000</u>	
34,000		34,000	
3,500		3,500	
15,000		15,000	
<u>4,500</u>		<u>4,500</u>	
23,000		23,000	
<u>8,000</u>		<u>8,000</u>	
15,000		15,000	
<u>19,000</u>		<u>19,000</u>	
6,000		6,000	
5,000		5,000	
200		200	
700		700	
900		1,200	
500		400	
—		<u>900</u>	
<u>13,300</u>		<u>14,400</u>	
	5,700		4,600
	28,800		27,700
	<u>2,500</u>		<u>2,500</u>
	<u>£26,300</u>		<u>£25,200</u>

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(1) Balance Sheets I, II and III are intermediate stages only in arriving at the final position. They cannot be considered as a logical sequence of events. For example in Balance Sheet I £25,000 stock was sold but there is no corresponding purchases.

(2) The previous stock £3,500 is incorporated in the cost of sales calculation on the Income Statement and this stock has been sold. The closing stock £8,000 represents purchases not sold and therefore reduces the amount of total purchases and opening stock to the amount actually sold. It is also an asset and therefore will appear on the Balance Sheet.

(3) Adjustments in respect of accruals and prepayments for rent and rates and for depreciation have been made:

<i>Rent</i>			<i>Rates</i>		
Paid	900	9 months	Paid	500	15 months
Accrual	<u>300</u>	3 months	Prepayments	<u>100</u>	(3 months)
Income Statement	<u>£1,200</u>	12 months		<u>£400</u>	12 months

Summary

(1) The basic accounting equation is:

Net Assets = Proprietor's Interest

Fixed Assets + Current Assets – Liabilities =
Capital + Profits – Drawings.

Fixed Assets + Current Assets – Liabilities =
Capital + Revenue – Expenses – Drawings

Fixed Assets + Current Assets + Expenses + Drawings =
Capital + Revenue + Liabilities

(2) The exchange of one asset for another of the same value will not create profits. However, if they are exchanged for an asset of a different value, profit or loss will result.

(3) The removal of assets by the proprietor for his personal use reduces the total assets and the proprietor's interest.

(4) The outflow of assets from a business which does not result in the acquisition of other assets creates expenses.

The above could be expressed in account form in the following manner:

<i>Account</i>	
Fixed Assets	Capital
Current Assets	Liabilities
Expenses	Revenue
Profit Withdrawn	Profit Retained

Questions

1.1 State the effect of the following transactions on the assets, liabilities and capital:

- (a) Proprietor introduces cash into business.
- (b) Business purchases fittings for cash.
- (c) Business purchases vehicles for cash
- (d) Rent is paid.
- (e) Stock purchased for cash.
- (f) Wages are paid.
- (g) Stock sold on credit.
- (h) A vehicle is sold for cash.
- (j) Additional stock is purchased on credit.
- (k) A further sale is made for cash.
- (l) Proprietor withdraws cash.

1.2. Give a definition for each of the following terms:

- Current Assets
- Gross Profit
- Working Capital
- Fixed Assets
- Current Liabilities
- Net Profit
- Proprietor's Interest.

1.3 John Smith owns a hardware business. The Balance Sheet at the beginning of the financial year showed the following position:

		A	B	C	D	E	F	G
Premises	2,000							
Equipment	900							
Van	700							
Stock	1,550							
Debtors	250							
Bank	1,470							
Cash	30							
	£6,900							
Creditors	1,200							
	£5,700							
Capital	5,700							
Profit								
	£5,700							

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Show the Balance Sheet after each of the following transactions has occurred:

- (a) Goods sold (Cash Sales £300, Credit Sales £100) which were included at cost in the stock at £280.
- (b) Van expenses – Tax £25; oil £10; maintenance £5 – all paid by cheque.
- (c) Drew cheques for £800 to pay the creditors. Paid £300 of the office cash into the bank.
- (d) Sold van at book value for £700 cash and paid this amount into the bank immediately.
- (e) Smith withdrew £50 from the bank for living expenses.
- (f) Cash £50 and cheques £200 received from debtors.
- (g) Sold office equipment valued in books at £40 for £70 cash.

1.4 Prepare a Balance Sheet from the following information taken from the books of John Jones at the end of his first year of trading on 31 March.

Cash at Bank	1,400	Amount owed by business	2,400
Stock	3,000	Amount owed to business	2,500
Freehold Premises	5,000	Cash in till	20
Wages owing to staff	40	Shop fittings	1,000
Cash withdrawn from business by proprietor	920	Net profit for year	2,920

Note: You will have to calculate the original capital.

1.5 From an examination of the following Balance Sheets prepare a statement explaining how the bank balance was reduced in view of the profit earned in the period.

	<i>1 Jan.</i>	<i>31 Dec.</i>	
Premises	10,000	15,800	
Fittings	3,500	5,600	
Vehicles	2,900	3,500	
Stocks	15,700	18,900	
Debtors	6,300	6,300	
Bank	<u>9,800</u>	<u>900</u>	
	48,200	51,000	
Creditors	<u>4,300</u>	<u>4,300</u>	
Net Assets	<u>£43,900</u>	<u>£46,700</u>	

Do you consider that the proprietor can withdraw all the profits earned?

- 1.6 Arrange the following information, given at 31 December, into two columns: (1) assets, drawings, expenses and (2) liabilities, capital, revenue.

Goods sold for cash	39,000
Goods sold for credit	35,000
Opening stock plus purchases	70,200
Wages	7,100
Electricity	300
Vehicle running expenses	800
Administration	900
Buildings	6,000
Equipment	1,000
Vehicles	2,000
Debtors	3,400
Bank balance	1,800
Creditors	4,600
Capital a/c	18,000
Drawings	3,100

- 1.7 From the following information prepare an Income Statement and Balance Sheet.

<i>Capital at 1 Jan.</i>		25,690
Building	15,000	
Motor vehicles	6,000	
Investment	5,000	
Debtors	9,000	
Cash	200	
Creditors		7,000
Rent	350	
Rates	570	
Wages	980	
Purchases	17,000	
Sales		22,000
Stock 1 Jan.	200	
Electricity	130	
Sundry expenses	50	
Motor expenses	120	
Stationery	90	
	<u>£54,690</u>	<u>£54,690</u>

Stock 31 Dec. = £2,500

1.8 Which of the following items would appear in a Balance Sheet?

- (a) The business is owed £7,500 by a debtor.
- (b) Stocks of goods held for resale are worth £13,800.
- (c) The premises in which the business stores clothing could be used for manufacturing portable radios.
- (d) Motor vehicles, cost £4,900, are used by the business.
- (e) The business has difficulty in meeting promised delivery dates.
- (f) The business maintains good relationships with the workforce.
- (g) The business has a near monopoly of the product it is selling.
- (h) Suppliers are owed £22,500 by the business.
- (i) A proportion of the stock cannot be sold.
- (j) The premises, which originally cost £15,000, are now worth £23,000.

What were your reasons for stating that certain items would not appear on the Balance Sheet?

1.9 (A) Analyse the following information into two columns, the totals of which will agree, when an appropriate capital figure has been completed.

Freehold land and buildings at cost	8,000
Plant and machinery at cost	10,000
Fixtures and fittings at cost	5,500
Depreciation to 31 Dec.: Plant and machinery	6,000
Fixtures and fittings	950
Stock at 1 Jan.	3,000
Purchases	54,400
Sales	70,000
Creditors	1,020
Drawings	1,800
Capital	?
Cash in hand	550
Bank overdraft	1,500
Debtors	1,200
Wages	3,000
Insurances	170
General expenses	1,250
Rent and Rates	600

(B) Using the details of (A) and the following additional information, prepare a Balance Sheet and an Income Statement.

- (i) There has been no provision made for unpaid rates amounting to £380.
- (ii) £100 of the rent has been paid in advance.
- (iii) The annual insurance premium is £120.
- (iv) Depreciation is to be charged at 10% per annum on cost for plant and machinery and fixtures and fittings..
- (v) The stock at 31 December was valued at £3,200.

CHAPTER 2

Methods of Data Recording

In practice a considerable number of transactions take place every day and for this reason a system of data recording is essential, this information being recorded in Accounts.

The accounting equation is

$$\begin{array}{l} \text{Assets + Expenses + Drawings =} \\ \text{Liabilities + Revenue Profit + Capital} \end{array}$$

and a movement of any one item is reflected by a complementary movement elsewhere. For example, the purchase of equipment on credit creates an asset and a corresponding liability.

This principle is used in the recording of accounting information so that items classified as assets, expenses and drawings appear on the left hand (Debit) side of an account, while liabilities, revenue/profit and capital appear on the right-hand (Credit) side.

An account would contain one or more of the items shown below and they would appear on the debit or credit side according to their nature.

<i>Debit</i> (Dr.)	<i>An Account</i>	<i>Credit</i> (Cr.)
Receipts of Cash		Payments of Cash
Assets Owned		Liabilities Owning
Expenses Incurred		Revenue Earned
Value Given to		Value Received from
Customers (Debtors)		Suppliers (Creditors)
Drawings		Capital

There is no logical reason for a debit entry appearing on the left-hand side of an account or a credit entry on the right-hand side; it is just historical practice. The dictionary definition of debit is 'to charge' and a debit entry in an account represents a charge to an individual or business, an expense or asset, on the basis that historically the accountant was charged with responsibility of accounting for cash. Since the accounting system recognises that whenever a transaction takes place two parties are involved, the charge (a debit) must be related to corresponding liability or income (a credit).

The following transactions will be illustrated: (A) proprietor introduced Capital, £4,200 (£4,000 at the Bank and £200 Cash in Hand); (B) purchased Stock £500, paid by cheque; (C) purchased Plant £1,000, paid by cheque; (D) withdrew £50 in Cash for personal use; (E) sold 50% of Stock for £600 cash; (F) paid £725 into the Bank.

<i>Bank Account</i>	
Capital (A) 4,000 Cash Banked (F) 725	Stock Purchased (B) 500 Plant Purchased (C) 1,000
<i>Cash Account</i>	
Capital Introduced (A) 200 Stock Sold (E) 600	Drawings (D) 50 Cash Banked (F) 725
<i>Capital Account</i>	
	Bank (A) 4,000 Cash (A) 200
<i>Drawings Account</i>	
Cash (D) 50	
<i>Stock Account</i>	
Bank (B) 500	
<i>Sales Account</i>	
	Cash (E) 600
<i>Plant Account</i>	
Bank (C) 1,000	

- Notes:* (1) These transactions were previously shown in the Balance Sheet of 'A' in Chapter 1.
 (2) The creation of profit has been ignored at this stage.
 (3) In order that the transactions may be clearly followed they have been referenced in accordance with the illustration.

The following fundamental principles of book-keeping can now be stated:

(1) Every transaction requires two entries of equal value, of which one will appear on the Debit side and the other on the Credit side of the relevant accounts.

(2) An account is opened for each type of transaction so that transactions of a similar nature can be brought together. Businesses will open accounts according to their individual needs.

(3) Trading profits are not calculated until the end of an accounting period, costs and revenue being kept separately.

Closing the Accounts

At an appropriate time the balance on each account is calculated. This involves the addition of both sides of the account and subtracting the smaller figure from the larger. This balance is then analysed between the amount chargeable to the Income Statement and the proportion which is an outstanding Balance Sheet item.

- (A) Proprietor introduced Capital £9,600 in the form of Premises, £8,000; Fixtures and Fittings £1,500; Cash in Hand £100.
- (B) Purchased, on credit, Stock £800.
- (C) Sold, on credit, 25% of stock for £1,200.
- (D) Received from Debtors by cheque £850.
- (E) Paid Creditors by cheque £700.
- (F) Withdrew £50 in cash for personal use.

Capital Introduced (A)	100	Drawings (F)	50
		Balance C/D	50
	<u>£100</u>		<u>£100</u>
Balance B/D	50		

Capital Introduced (A)	8,000
------------------------	-------

Capital Introduced (A)	1,500
------------------------	-------

Drawings (H)	50	Cash (A)	100
Balance C/D	9,550	Premises (A)	8,000
		Fixtures (A)	1,500
	<u>£9,600</u>		<u>£9,600</u>
		Balance B/D	9,550

Cash (F)	50	Transfer to capital (H)	50
----------	----	-------------------------	----

Debtors (D)	850	Creditors (E)	700
		Balance C/D	150
	<u>£850</u>		<u>£850</u>
Balance B/D	150		

Creditors (B)	800	25% Transferred to cost of sales (G)	200
		Balance C/D	600
	<u>£800</u>		<u>£800</u>
Balance B/D	600		

Bank (E)	700	Stock purchased (B)	800
Balance C/D	100		
	<u>£800</u>		<u>£800</u>
		Balance B/D	100

Credit sales (C)	1,200	Bank (D)	850
		Balance C/D	350
	<u>£1,200</u>		<u>£1,200</u>
Balance B/D	350		

	Debtors (C)	1,200
--	-------------	-------

Stock A/C (G)	200
---------------	-----

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<i>List of Balances</i>	<i>Debit</i>	<i>Credit</i>
Cash	50	
Premises	8,000	
Fixtures	1,500	
Capital		9,550
Bank	150	
Stock	600	
Creditors		100
Debtors	350	
Sales		1,200
Cost of Sales	200	
	<u>£10,850</u>	<u>£10,850</u>

The above balances are now allocated to the Profit and Loss Account or the Balance Sheet.

Profit and Loss Account or Income Statement

Cost of Sales	200	Sales	1,200
Profit Transferred to Capital	1,000		
	<u>£1,200</u>		<u>£1,200</u>

Balance Sheet

Fixed Assets		
Premises	8,000	
Fixtures and Fittings	<u>1,500</u>	
		9,500
Current Assets		
Stock	600	
Debtors	350	
Bank	150	
Cash	50	
	<u>1,150</u>	
Less Current Liabilities		
Creditors	<u>100</u>	
		<u>1,050</u>
		<u>£10,550</u>
Proprietor's Interest: Capital		<u>£10,550</u>

(1) This example should be compared with the moving Balance Sheet of 'B' in Chapter 1, p.11. The final result is the same by both methods.

(2) The accounts for debtors and creditors are summaries or total accounts. Details of individual customer's and supplier's accounts would be maintained elsewhere and the total of the balances on these individual accounts would agree with the balances on the total accounts.

(3) The Profit and Loss Account, previously referred to as the Income Statement, is a ledger account showing the results for a particular period.

Accounting for outstanding and prepaid expenses

It is necessary to account for accruals and prepayments for certain expenses, and the treatment of these items in the books of account is described in the following paragraphs.

Wages

In the first year of business the organisation had paid £8,000 in cash for wages. PAYE £1,620 was deducted from wages, of which £1,500 had been paid. Pension contribution was £250. At the end of the first financial year £160, representing one week's gross wages, was due but had not been paid. The Wages Account is used to calculate the wages for the period under review.

<i>Wages Account</i>		<i>PAYE Account</i>	
Cash	8,000	Cash	1,500
PAYE	1,620	Balance c/d	120
Pensions			<u>£1,620</u>
Cash	250		
Amount due			
Creditor		Balance b/d	120
c/d	160		
	<u>£10,030</u>		
	Income Statement		
	10,030		
	<u>£10,030</u>		
	Balance b/d		
	160		

The law requires that before an employer pays his staff he is obliged to make certain deductions which he pays over to government agencies on behalf of the employee. These include PAYE, graduated pension and insurance. In calculating the outstanding amount at the end of a financial period an estimate of the gross liability is made but there is no legal liability for the deductions until the wages are actually paid.

The amounts due, Gross Wages £160 and PAYE £120, will be shown as liabilities on the Balance Sheet.

The charge of £10,030 to the Income Statement represents the total cost of wages for the financial period.

In the following year the transaction were: wages paid, £8,200; PAYE paid, £1,600 and Insurance, £260. Outstanding wages at year end amounted to £180 and £130 was due for PAYE.

Depreciation

The majority of expenses appearing on the Income Statements incurred by the business involved the payment of cash, and this reduction in the assets of the business is matched by a corresponding reduction in the profit. There will, however, be items in the Income Statement which, while representing an expense, do not involve cash expenditure. One of these items is referred to as Depreciation and is an attempt by management to ascertain the cost of using the fixed assets of the business during the accounting period.

The charge so made is a purely arbitrary figure, being based on the expected life of each individual asset or each class of asset, and with the exception of a lease on property this period may be extremely difficult to determine. The purpose of depreciation is to apportion the original cost over a number of financial periods mainly to ensure that, so far as is possible, the results are shown on a consistent basis and no single year is charged with the total cost of a particular asset.

The charge may be arrived at by the formula:

$$\frac{\text{Original Cost}}{\text{Estimated Life}} = \text{Annual Charge}$$

the estimated life being stated in years or total working hours. In the latter case it will be necessary to maintain records of the hours actually worked in order to calculate the annual charge. The annual charge may be stated as a percentage of the original cost or as a percentage of the original cost less all previous depreciation charges. The latter method will require a rate of approximately $3\frac{1}{4}$ times the first method in order to eliminate the cost over the estimated life.

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A piece of equipment is purchased at a cost of £2,000 and has an estimated life of 5 years. The depreciation charge would be calculated by either of the following methods:

Cost £2,000
Estimated life 5 years
Annual rate 20%
Annual charge £400

Yr.	1	Cost	£2,000
		Depreciation	<u>400</u>
		Written down value	1,600
	2	Depreciation	<u>400</u>
		Written down value	1,200
	3	Depreciation	<u>400</u>
		Written down value	800
	4	Depreciation	<u>400</u>
		Written down value	800
	5	Depreciation	<u>400</u>
		Written down value	NIL
		Method known as	
		'Fixed Instalment.'	

Cost £2,000
Estimated life 5 years
Annual rate 65% on value remaining
Annual charge?

Yr.	1	Cost	£2,000
		Depreciation	
		at 65%	<u>1,300</u>
		Written down value	700
	2	Depreciation	
		at 65% on £700	<u>455</u>
		Written down value	245
	3	Depreciation	
		at 65% on 245	<u>160</u>
		Written down value	85
	4	Depreciation	
		at 65% on 85	<u>55</u>
		Written down value	30
	5	Depreciation	
		at 65% on 30	<u>20</u>
		Written down value	10
		(charged to P and L in	
		5th yr)	

Method known as
'Reducing Instalment'
(Rate would be obtained
from actuarial tables).

The Profit and Loss Account may well be showing an increasing charge in the later years for repairs and maintenance. Under the reducing instalment system this charge may to a certain extent be counteracted by the reducing depreciation charge.

As the accounting entries are the same irrespective of the method used for arriving at the annual charge, it is intended to demonstrate only the fixed instalment method, because it is considered that an understanding of the accounting techniques are of more importance than the method of calculating the annual charge.

An organisation leases premises for 50 years at a total cost of £100,000 paid on occupation of the premises. This will involve an annual charge of £2,000 for depreciation or amortisation of the lease (£100,000/50).

<i>Lease Account</i>				<i>Depreciation Provision</i>	
Yr. 1	100,000	Yr. 50	100,000	Yr.50	100,000
Cash		Depn.		Transfer	
				to Lease	
					Yr.1
					2,000
					Income
					Statement
					Yr. 2 – do – <u>2,000</u>
					4,000
					Yr. 3 – do – <u>2,000</u>
					6000
					4-50–do–94,000
					(47 yrs x 2)
					<u>£100,000</u>
					<u>£100,000</u>

The annual provision for depreciation is charged to the Income Statement and accumulated over the period of 50 years in the provision account. On the expiry of the lease the accumulated depreciation, which is appropriated profit, is transferred to the asset account in order to eliminate the original cost.

It must be emphasised that the annual charge for depreciation appears in the Profit and Loss Account with a corresponding entry in the Depreciation Provision. In subsequent years the annual charge to the Profit and Loss is added to the accumulated balance on the Depreciation Provision, this then being shown on the Balance Sheet as a deduction from the relative Fixed Assets. Under no circumstances is the accumulated charge written back to the Profit and Loss Account.

A business organisation whose financial year ends on 31 December purchased a piece of plant on 1 January for £20,000. The plant had an expected life of ten years. On 30 June in the following year a further purchase at a cost of £30,000 was made, this equipment having an estimated life of five years.

Depreciation commences, and is calculated, from the date of purchase.

<i>Plant</i>				<i>Plant Depreciation Provision</i>	
Yr. 1	20,000			Yr. 1	2,000
Cash				Income Statement	
Yr. 2	30,000			1/10th of 20,000	
Cash				Yr. 2	5,000
	<u>£50,000</u>			Income Statement	
				1/10th of 20,000 +	
				1/5th of 30,000	
				for 6 months.	
					<u>7,000</u>
				Yr. 3	8,000
				Income Statement	
				1/10th of 20,000	
				1/5th of 30,000	
					<u>£15,000</u>

A company purchases a vehicle for £1,200 and proceeds to depreciate it over four years. It is subsequently sold at the end of the third year for £320.

<i>Vehicle Account</i>				<i>Vehicle Depn. Provision</i>			
Yr. 1	1,200	Yr. 3	1,200	Disposal	900	Yr. 1	
Cash		Disposal		Account		Income	
		Account				Statement	300
						Yr.2 – do	–300
							600
						Yr. 3 – do	– 300
					£900		£900

Vehicle Disposal Account

<i>Vehicle Disposal Account</i>		<i>Vehicle Disposal Account</i>	
Yr. 3 Original	1,200	Cash	320
Cost (Asset a/c)		Depn. Provision	900
Income	20		
Statement			
(Profit on sale)			
	£1,220		£1,220
Note: Original Cost	£1,200		
Depreciation	900		
<i>Written down value</i>	300		
Cash proceeds	320		
Profit	£20		

A company's financial year commences on 1 January and the following transactions took place during the subsequent twelve months.

	<i>Plant Account</i>	<i>Depn. Provision</i>
Balances at 1 Jan.	£49,200	£28,500
Sales at 31 Mar. – Original Cost		£18,000
Proceeds		£ 2,500
Additions at 30 June – Cost		£ 6,000
Sales at 30 Sept. – Original Cost		£ 7,200
Proceeds		£ 5,000
Additions at 31 Oct. – Cost		£ 9,600

Sales at 31 March comprised three items: £4,000, £8,000 and £6,000 purchased 11 years, 8 years and 7¼ years before commencement of current year.

Sales on 30 September comprised two items: £3,000 and £4,200 purchased 4½ years and 2¼ years prior to commencement of current year.

Annual depreciation rate is 10% on cost commencing at date of purchase and ceasing at date of sale.

*Calculation of Depreciation Charge for Financial Period
and Profits or Losses Arising on Sales*

SALES SCHEDULE

Cost	Date of Purchase	Date of sale	Age at sale	Annual Depn.	Total Depn.	Book Value	Proceeds	Profit or Loss	Depn. Charge (Current Year)
4,000		31 Mar.	11¼ yrs.	400	4,000	Nil		—	—
8,000		31 Mar.	8¼ yrs.	800	6,600	1,400		200	(1 Jan. - 31 Mar.)
6,000		31 Mar.	7½ yrs.	600	4,500	1,500		150	— do —
<u>£18,000</u>					<u>£15,100</u>	<u>2,900</u>	2,500	(400)	<u>£350</u>
3,000		30 Sept.	5¼ yrs.	300	1,575	1,425		225	(1 Jan. - 30 Sept.)
4,200		30 Sept	3 yrs.	420	1,260	2,940		315	— do —
<u>7,200</u>					<u>2,835</u>	<u>4,365</u>	5,000	635	540
<u>£25,200</u>					<u>£17,935</u>	<u>7,265</u>	<u>7,500</u>	<u>235</u>	<u>£890</u>

PURCHASES SCHEDULE

Cost	Date of Purchase	Annual Depn.	Depn. for Current yr.
6,000	30 June	600	300 (1 Jul. to 31 Dec.)
9,600	31 Oct	960	160 (1 Nov. to 31 Dec.)
		<u>£1,560</u>	<u>£460</u>

Depreciation charge for year:	
Cost of Plant at 1 Jan.	49,200
Less Cost of Sales in Year	25,200
	<u>£24,000</u>
10% Depreciation for Year	2,400
Depreciation on Sales	890
Depreciation on Purchases	460
	<u>£ 3,750</u>

<i>Plant Account</i>		<i>Depreciation Provision</i>		
1 Jan.	49,200	31 March	31 Dec.	1 Jan.
Bal. b/d		Cost of	Written	Bal. b/d 28,500
		Disposals 18,000	Back on	1 Dec.
1 Jun.	6,000	30 Sept.	Sales 17,935	Profit/
Purchases		— do — 7,200	(Disposal	Loss a/c 3,750
1 Oct.	9,600	1 Dec. 39,600	a/c)	
Purchases		Bal. c/d	Bal. c/d 14,315	
	<u>£64,800</u>	<u>£64,800</u>	<u>£32,250</u>	<u>£32,250</u>
1 Jan.				1 Jan.
Bal. b/d.	39,600			Bal. b/d 14,315

Vehicle Disposal Account

31 Mar. Cost 18,000	31 Mar. Cash 2,500
30 Sept. Cost 7,200	30 Sept. Cash 5,000
31 Dec. Profit 235	31 Dec. Depn. 17,935
on Sale	
<u>£25,435</u>	<u>£25,435</u>

Replacement of Assets

The annual charge to the Income Statement by way of depreciation is, as has already been stated, no more than a method of charging the original cost of an asset against subsequent revenue. It is not a method of providing capital funds for the purchase of replacement assets when the occasion arises. The depreciation charge merely reduces the profit available for distribution by way of drawings or dividends to the proprietors, partners or shareholders. The current assets remaining in the business could, however, be used for other purposes, e.g. stock purchase.

Such funds should, however, be utilised by investment in a more definite asset for realisation when required. It will, however, be necessary to take into account the fact that the replacement cost may exceed the cost of the original asset and provision must be made accordingly.

The withdrawal of additional cash would have no effect on the profits available for distribution to the proprietors who will consider that any balance on the Profit and Loss Account can be treated as an increase in their capital and may wish to withdraw funds which in fact are not available. To prevent the possibility of cash being withdrawn by the proprietors the profits represented by the increased cash investment should be withdrawn and placed in a separate account referred to as 'Plant Replacement Additional Cost Reserve'. These accumulated profits will subsequently represent a partial cost of the replacement assets.

	<i>Plant A/c</i>		
Original Cost	£100,000	Accumulated Depreciation	£100,000
	<i>Depreciation Provision</i>		
Transfer to Plant	100,000	Annual charges Yrs. 1–10	100,000
	<i>Investments</i>		
Cost at end of 10 years	143,000	Proceeds on sale	143,000
	<i>Plant A/c</i>		
Cost of new equipment	143,000		
	<i>Bank</i>		
Sale of Investment	143,000	Plant purchase	143,000
	<i>Plant Replacement Reserve</i>		
		Yrs 4–7 @ £4,000 (P and L A/c)	16,000
		Yrs 8–10 @ £9,000	27,000
			£43,000

Funds in the form of cash have been withdrawn for investment purposes. These profits are now represented in the fixed assets and the retained profits represented in the Reserve are part of the Proprietor's Interest. As an alternative to placing cash outside the business the profits may be invested within the business, when it will be necessary to dispose of the assets represented by such profits in order to obtain the funds necessary for the purchase of new assets.

The following examples of the manner in which businesses might invest their funds should be studied.

	A	B
Capital	1,500,000	1,500,000
Profit and Loss	10,000	10,000
Plant replacement reserve	50,000	—
	<u>£1,560,000</u>	<u>£1,510,000</u>
Fixed Assets		
cost depn.		
Land 450,000	450,000	450,000
Plant 380,000	350,000	30,000
	<u>480,000</u>	<u>480,000</u>
Investments	400,000	—
Current Assets		
Stock	645,000	805,000
Debtors	90,000	280,000
Bank	5,000	5,000
	<u>740,000</u>	<u>1,090,000</u>
Creditors	60,000	60,000
	<u>680,000</u>	<u>1,030,000</u>
	<u>£1,560,000</u>	<u>£1,510,000</u>

Company A has adopted a conservative policy towards asset replacement — the funds represented by the annual depreciation and subsequent appropriations taking into account increased cost have been invested outside the business. These can be sold to obtain the funds for asset replacement.

Company B has not adopted a policy which provides for asset replacement. Funds represented by retained profits including depreciation have been utilised within the business. When replacement becomes necessary current assets must be realised to obtain the required cash. A time lag between realising stock and obtaining payment may give rise to delay in purchase of fixed assets.

Generally when companies are considering investing their funds for plant replacement, consideration must be given to the rate of return in other businesses compared with their own business.

Bad Debts

Prior to the preparation of the final accounts it is essential that the value of all assets appearing on the Balance Sheet is as correct as can be ascertained. In this respect it is necessary to examine the debtors to ensure that every provision has been made against the possibility of non-payments and that Bad Debts likely to arise are charged to the Profit and Loss Account at the earliest opportunity.

There are two factors involved: (1) the known Bad Debts that have arisen in a trading period, and (2) the certainty that a proportion of the Debtors will not settle their accounts.

The former situation arises where customers are declared bankrupt, the latter is based on the company's previous experience.

A provision for bad debts is created in an attempt to charge possible losses to the trading period in which the revenue was earned. In the absence of a provision the bad debt would be charged in the trading period in which it was actually incurred.

Assume debtors are £5,000; known bad debts £100.

<i>Debtors</i>		<i>Bad Debts</i>	
Dec. 31		Bad Debt	100
Balance	5,000	Balance	
		c/d	4,900
	<u>£5,000</u>		<u>£5,000</u>
Balance			
b/d	4,900		

Debtors		Income	
Balances		Statement	100
Written off	100		
	<u>100</u>		<u>100</u>

There will be cases where a firm suspects that a debtor may be unable to meet their commitments or, for reasons of prudence, a general provision has to be made to cover the recognised risk of advancing credit. In these cases a Bad Debt Provision Account is set up, the purpose being to ensure that revenue is charged with the estimated bad debts for the period under review. The bad debts, when actually incurred, are then charged against the provision account.

Assume debtors are £4,900 and a provision of 5% is required for doubtful debts.

<i>Debtors</i>		<i>Bad Debt Provision</i>	
Balance		Income	245
b/d	4,900	Statement	
		(5% of 4,900)	

Notes: (1) As with depreciation the provision is not an outflow of funds: cash has not been paid away. (2) No entry is made in the Debtors Account when the provision is created; this will take place when the bad debt actually arises.

In year two actual bad debts were £230. At the end of the year debtors were £5,700 and a provision of 5% was again required.

<i>Debtors</i>		<i>Bad Debt Provision</i>	
Balance b/d	4,900	Bad Debts	230
Sales	15,000	Balance	285
		c/d (5% of	5,700)
			<u>£515</u>
	<u>£19,900</u>		<u>£515</u>
Balance b/d	5,700	Balance b/d	245
		P and L	270
			<u>285</u>

The charge to the Profit and Loss Account (£270) is made up of: 5% of £5,700 = £285 less Bad Debt Provision not required in the previous year of £15. Balance Sheet would show :

Debtors	5,700	
Less Bad		
Debt		
Provision	<u>285</u>	
		£5,415

indicating the amount expected to be received from debtors.

Questions

2.1 Show the entries in the Stationery Account for the following transactions during the year ending 31 March 19–3, indicating the charge to be transferred to the Profit and Loss Account:

1 April 19–2. Stock of paper, etc., valued at £540. £210 was owing to suppliers, invoices not having been entered in previous financial year.

During the period 1 April 19–2 to 31 March 19–3, payments to suppliers were £4,630; this included £800 for goods delivered on 4 April 19–3.

At 31 March 19–3 £380 was due to suppliers and stock was valued at £270.

Stationery at a cost of £60 had been taken during the year for private purposes.

2.2 The rent paid by a business is £1,800 p.a. due at the end of March, June, September and December in arrears. The financial year ends 28 February and rent had been charged to the end of the previous December. The rates for the premises are paid half-yearly in advance. These amounted to £840 for the half-year to 30 September, charged in April, and £960 for the half-year to 31 March, charged in October.

Show the entries in the Rent and Rates Account for the year ending 28 February 19–3.

2.3 The following charges for Insurance had been entered in the Insurance Account:

Fire Premium £4,800 year to 30 June, charged July.

Burglary Premium £720 year to 31 October, charged November.

Employer's Liability £1,000 Deposit + $\frac{1}{4}$ of total wages; policy covers year to 31st December.

Wages for year were £2m.

The deposit had been charged in January 19–3; the balance on the policy would not be charged until April 19–4.

In February 19–3 the business had been charged with the additional premium of $\frac{1}{4}$ of £1,600,000 for the year to December 19–2.

Show the entries in the Insurance Account for the year to 31 December 19–3.

2.4 A company makes up its accounts to 30 June each year and its vehicles are depreciated at 20% on cost. A full year's charge is made in year of purchase but no charge is made in year of sale. At 30 June 19–3 the Balance Sheet showed:

Motor Vehicles £82,450 (At cost)
 Depreciation Provision £46,690.

During the year to 30 June 19–4 the following transactions took place:

		<i>Cost</i>	<i>Proceeds</i>	<i>Purchased</i>
Purchases	HLV 496L	£4,250		
	HLV 997L	£2,950		
Sales	NBG 12H	£ 795	£110	May 19–0
	UMA 992J	£1,825	£995	Sept 19–1

You are required to show the entries in the following accounts – Motor Vehicles, Depreciation Provision, Vehicles Disposal – in respect of the above transactions in the year ending 30 June 19–4 and to support your entries with supporting schedules.

CHAPTER 3

Summarising the Collected Data

The information required for the preparation of accounts will be obtained from the original documents, that is invoices from suppliers or to customers, notification of returns or over- or under-charges (credit notes), remittance advices to suppliers or from customers, and any other documents a business may consider necessary to ensure that accounts are written up accurately and convey the true state of the business.

In order to eliminate a vast amount of repetitive work the original documents may be summarised or listed and the main ledger of the business would record total transactions only, with the accounts of individual debtors and creditors being recorded separately in debtor and creditor ledgers.

The example which follows will demonstrate the manner in which this summarising might be carried out and the subsequent recording in the respective accounts.

When all the postings have been carried out it will be necessary to check the accuracy of the work and this is done by balancing the accounts and extracting a Trial Balance, a listing of all the balances in the ledger prior to the preparation of the Income Statement and Balance Sheet.

The Trial Balance, when agreed, is used as a working paper for the preparation of the final accounts and is also used for noting adjustments required to a number of the accounts in respect of items which (1) have not been entered prior to balancing and relate to the particular financial period (Accruals); (2) have been entered but relate to a subsequent financial period (Prepayments).

These adjustments include valuation of closing stock, depreciation charges, profits or losses on the sale of fixed assets, bad debt provision.

B & J Black, trading as Black Bros., showed the following balances in their books at 1 January:

Leasehold shop	£18,000	Fittings	£4,560
Vehicles	960	Bank	4,200
Cash	40	Loan (Northern Finance Co.)	3,600
Commissioners Inland		Insurance Co. re Pension	
Revenue re PAYE	120	Contributions	175

Depreciation Provisions

Premises	2,700
Fittings	1,530
Vehicles	650

Stocks £1,554 consisted of five televisions at £90 each, 16 radios at £60 each, nine hairdryers at £16 each.

Debtors £2,500 were D. Hyams (£700); W. Jones (£1,200); A. Williams (£600).

Creditors £1,315 were British Rail (£75); A. Jackson (£300); Printers (£690); SEEB (£250).

- (1) From the above information calculate opening capital.
- (2) Open the necessary ledger accounts to show the above balances.
- (3) Record the following transactions in the necessary books or summary sheets and write up the ledger accounts.
- (4) Prepare a Trial Balance and, taking into account the additional information provided, show the Profit and Loss Account for the month of January and a Balance Sheet as at 31 January.

Invoices received from suppliers	:
Jan 2 Printers Ltd	: Letterheads, £80; Typewriter, £250
Charles Ltd	: 12 Radios @ £60, £720
	: 42 Hairdryers @ £16, £672
5 Post Office	: Telephone, £30
SEGAS	: 2 Heaters, £2,150
Trading Stamp Co.	: Cost of Stamps, £720
12 A. Jackson	: Building Repairs, £250
Motor Mart	: Vehicle, £1,275 (including tax and insurance, £75, to 31 March)
19 Charles Ltd	: 81 Televisions @ £90, £7,290
	: 50 Radios @ £60, £3,000
Town Property	: Three months rent to 31 March, £750
	: Six months rates to 30 June, £720
22 British Rail	: Carriage charges, £70
Transit Insurance Co.	: Fire insurance premium, year to 31 Dec. £120
25 SEEB	: Electricity, £80

52 *A Foundation in Business Accounting*

Invoices despatched to customers	:	
Jan 3 A. Williams	:	3 Televisions @ £135, £405
	:	10 Hairdryers @ £24, £240
20 W. Jones	:	6 Radios @ £90, £540
	:	15 Televisions @ £135, £2,025
24 C. Arthur	:	20 Televisions @ £135, £2,700
	:	20 Radios @ £90, £1,800

Petty Cash transactions:

Jan 1	£160 from bank
3	Travelling, £10
9	Petrol and Oil, £25
15	Advertising Situations Vacant, £28
22	Repairs, £35
23	Petrol and Oil, £33
25	Travelling, £12
29	Cleaning, £15
	Stationery, £4
	Postage, £18

Bank Receipts:

Jan 1	W. Jones, £475; Discounts, £25; A. Williams, £600
3	Sale of Vehicle, £150
5	Cash Sales Banked, £4,500
	20 Televisions @ £135, £2,700
	17 Radios @ £90, £1,530
	15 Hairdryers @ £24, £360
	Gift Vouchers Redeemed, £90
9	W. Jones, £665; Discount, £35
11	C. Arthur, £2,430; Discount, £270
19	Cash Sales Banked, £5,627
	25 Televisions @ £135, £3,375
	20 Radios @ £90, £1,800
	23 Hairdryers @ £24, £552
	Gift Vouchers Redeemed, £100
25	D. Hyams, £350

Bank Payments:

Jan 1	£160 to Petty Cash
5	Salaries, £220
12	Salaries, £250
	P.A.Y.E., £120; Pension Fund, £175
19	Salaries, £260
	George Hotel, £45 re accommodation
22	Charles, £890; Discount, £40
	Printers, £655; Discount, £35
26	Salaries, £280; Insurance, £141.
31	SEEB, £250; A. Jackson, £300
	Charles, £6,930; Discount, £360

Items not entered at month end:	Accounting treatment	Explanations
1. A television set has been returned by a customer and subsequently returned to supplier.		Sale, Debtor, Purchase and Creditor suspended. Appropriate Credit Notes will follow in Feb. Provisions will be created in the Sales and Purchases accounts which will be set against Debtors and Creditors. These provisions will be eliminated by the Credit Notes when posted in Feb.
2. 10% loan interest.	Dr. Interest, £ 30 Cr. Creditors, £ 30	Income Statement must show cost of money borrowed (10% on £3,600 for one month).
3. Salaries, £310; PAYE, £150; Pensions, £220.	Dr. Salaries, £680 Cr. Creditors, £310 Cr. PAYE, £150 Cr. Pension Fund £220	£310 represents amounts due from previous pay day to end of financial year. The creditors for unpaid PAYE and Pensions are amounts previously deducted from salaries not yet paid over. They are an addition to the net salaries.
4. Depreciation: premises 5% p.a.; fittings 10% p.a.; vehicles 25% p.a.	Dr. Depn., £167 Cr. Depreciation Provision: Premises, £ 75 Fittings, £ 62 Vehicles, £ 30	The cost of using the fixed assets for one month. Calculations according to depreciation schedule.
5. Bad debt, £315, D. Hyams.	Dr. Bad Debt, £315 Cr. Debtor, £315	The asset debtor is reduced by reason of non-payment; revenue is reduced through cancellation of sale.
6. Trading stamps stock valued £460	Dr. Stocks, £460 Cr. Sundry Expenses, £460	Part of the expense incurred in purchasing trading stamps carried forward to next financial period when they will be issued against sales.
7. Stock in hand, £1,218	Dr. Stock, £1,218 Cr. Purchases, £1,218	The cost of value of goods remaining on hand at end of financial period for use in following period.
8. The vehicle sold had cost £720 2½ years previously.	Dr. Depn. Provision £450 Cr. Vehicle £450 Dr. Loss on Sale £120 Cr. Vehicle £120	Accumulated depreciation for period asset was held – see depr. schedule. Difference between book value and cash proceeds. See depreciation schedule.

In order to assist in the preparation of the final accounts it is necessary to do the following:

- (1) Summarise items of a like nature, e.g. purchases and expenses on credit, sales on credit, cash transactions.
- (2) Maintain separate debtor and creditor total accounts, these being supported by the entries in the individual accounts written up elsewhere in the organisation.
- (3) Balance accounts prior to the extraction of the Trial Balance.
- (4) Maintain stock cards to assist in the valuation of closing stock.
- (5) Prepare schedules supporting the entries on the sale and purchase of assets and the annual depreciation charges.
- (6) Carry out the final adjustments in both the Trial Balance and the individual accounts.

Calculation of opening capital:

Leasehold Shop	18,000	Northern Finance	3,600
Fittings	4,560	Creditors	1,315
Vehicles	960	PAYE	120
Stocks	1,554	Pension Fund	175
Debtors	2,500	Depreciation: Lease	2,700
Bank	4,200	Fittings	1,530
Cash	40	Vehicle	650
			10,090
		∴ Opening Capital	21,724
	£31,814		£31,814

Summary of Petty Cash Transactions

Details	Receipts	Payments	Travel	Motor Expenses	Sundries	Repairs	Stationery	Postage
Jan. 1		b/f 40						
		From Bank 160						
Jan. 3			10					
Jan. 9			25	25				
Jan. 15			28		28			
Jan. 22			35			35		
Jan. 23			33	33				
Jan. 25			12					
Jan. 29			15		15			
			4				4	
			18					18
			<u>180</u>	<u>58</u>	<u>43</u>	<u>35</u>	<u>4</u>	<u>18</u>
Balance	c/d	20						
		<u>£200</u>	<u>£200</u>	<u>a/c no. 15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>
Feb. 1	Balance	b/d 20						

The expenditure of £180 would be reimbursed from Bank and entered in the P.C. summary as a receipt on 1 February.

A CASH BOOK

		<i>Receipts</i>					
		<i>Total</i>	<i>Debtors</i>	<i>Capital</i>	<i>Sales</i>	<i>Sundries</i>	<i>Discounts</i>
Jan. 1	Balance	4,200				4,200	
	W. Jones	475	475				
	A. Williams	600	600				25
Jan. 3	Vehicle	150		150			
Jan. 5	Cash Sales	4,500			4,500		
Jan. 9	W. Jones	665	665				
Jan. 11	C. Arthur	2,430	2,430				35
Jan. 19	Cash Sales	5,627			5,627		270
Jan. 25	D. Hyams	350	350				
		<u>£18,997</u>	<u>£4,520</u>	<u>£150</u>	<u>£10,127</u>	<u>£4,200</u>	<u>£330</u>
Feb. 1	Balance	8,321	b/d	3	22		5/24
			5				

Payments

	Total	Trade creditors	Salaries	Sundries	Discounts
Jan. 1	160	Petty Cash		160 14	
Jan. 5	220	Salaries	220		
Jan. 12	120	PAYE		120 8	
	175	Pension		175 9	
Jan. 19	250	Salaries	250		
	260	Salaries	260		
Jan. 22	45	George Hotel		45 15	
	890	Charles	890		40
Jan. 26	655	Printers	655		35
	280	Salaries	280		
Jan. 31	141	Insurance	141		
	250	SEEB	250		
	300	A. Jackson	300		
	6,930	Charles	6,930		360
	<u>£10,676</u>		<u>£1,151</u>	<u>£500</u>	<u>£435</u>
	8,321				
	<u>£18,997</u>				
		a/c no	25		7/24
		7			

Discounts are entered in the Bank Book as a convenient method of posting accounts. They do not constitute receipts or payments of the business.

Summary of Purchase Invoices

<i>Supplier</i>	<i>Total</i>	<i>Stock</i>	<i>Telephone and Printing</i>	<i>Rent and Rates light and heat</i>	<i>Fixed assets</i>	<i>Insurance</i>	<i>Sundries</i>	<i>Repairs</i>	<i>Vehicle Expenses</i>
Jan. 1 Printers Ltd	330		80		250				
Charles Ltd	1,392	1,392							
Jan. 5 Post Office	30		30						
SEGAS	2,150				2,150				
Stamp Co.	720						720		
Jan. 12 A. Jackson	250							250	
Motor Mart.	1,275								
Jan. 19 Charles Ltd	10,290	10,290			1,200				75
Town Property	1,470			1,470					
Jan. 22 British Rail	70						70		
Transit Ins.	120					120			
Jan. 25 SEEB	80			80					
	£18,177	11,682	110	1,550	3,600	120	790	250	75
A/c Nos.	7	4	19	20	1/3	21	17	18	16

Each document would be serially numbered for identification, this being entered in the summary.

The classifications are intended to be an indication only and are not exhaustive. The Sales Invoice Summary would include carriage, royalty, VAT and other charges not part of sales.

Summary of Sales Invoices

<i>Customer</i>	<i>Total</i>	<i>TVs</i>	<i>Radios</i>	<i>Hair Dryers</i>
Jan. 3 A. Williams	645	405		240
Jan. 20 W. Jones	2,565	2,025	540	
Jan. 24 C. Arthur	4,500	2,700	1,800	
	7,710	5,130	2,340	240
A/c Nos.	5	22	22	22

Fittings (1)

Jan. 1	
Balance	4,560
Invoices	<u>2,400</u>
	£6,960

Leasehold Shop (2)

Jan 1	
Balance	18,000

Vehicles (3)

Jan. 1 Balance	960	Jan. 3 Sale Proceeds	150
Invoices	1,200	Jan. 31 Depn.	450
		Loss on Sale	120
		Balance c/d	<u>1,440</u>
	<u>£2,160</u>		<u>£2,160</u>
Balance b/d	1,440		

Stock (Cost of Sales) (4)

Jan. 1 Balance	1,554	Jan 31 Balance c/d	1,218
Invoices	11,682	Returns c/d	90
		Cost of Goods Sold	<u>11,928</u>
	<u>£13,236</u>		<u>£13,236</u>
Balance b/d	1,218		
Balance b/d	90		

Debtors (5)

Jan 1 Balance	2,500	Jan 31 Cash	4,520
Sales	7,710	Discounts	<u>330</u>
	10,210		4,850
		Bad Debt	315
		Balance	<u>5,045</u>
	<u>£10,210</u>		<u>£10,210</u>
Balance b/d	4,910		
Balance b/d	<u>135</u>		
	5,045		

Northern Finance Loan (6)

Jan. 1	
Bal. b/d	3,600

Creditors (7)

Jan. 31 Cash	9,025	Jan. 1 Balance b/d	1,315
Discounts	435	Invoices	18,177
	9,460		19,492
Balance c/d	10,032		
	<u>£19,492</u>		<u>£19,492</u>
		Feb 1 Balance b/d	9,942
		Return b/d	90
			10,032

Comm. Inl. Rev. PAYE (8)

Jan. Bank	120	Jan 1 Balance b/d	120
		31 Accrual—Salaries	150

Pension Fund (9)

Jan. Bank	175	Jan 1 Balance	175
		Jan 31 Accrual— Salaries	220

Depreciation: Lease (10)

Jan 1 Balance	2,700
Jan 31 P and L	75
	<u>£2,775</u>

Depreciation: Fittings (11)

Jan 1 Balance b/d	1,530
Jan 31 P and L	62
	<u>£1,592</u>

Depreciation: Vehicles (12)

Jan 31 Written back to Vehicle a/c on sale	450	Jan. 1 Balance b/d	650
Bal. c/d	230	Jan 31 P and L	30
	<u>£680</u>		<u>£680</u>
		Feb 1 Balance	230

Capital (13)

Jan 1 Balance b/d	21,724
Jan 31 Profit for month	2,206
	<u>£23,930</u>

Petty Cash Control (14)

Jan 1 Bal. b/f	40	Jan 31 Expend.	180
Bank	160	Bal.	20
	<u>£200</u>		<u>£200</u>
Feb. 1 Bal.	20		

Travel (15)

Jan. 31 Petty Cash	22	Jan. 31 P and L	67
Bank	45		
	<u>£67</u>		<u>£67</u>

Vehicles Expenses (16)

Jan. 31 Petty Cash	58	Jan 31 Ins. Prepaid	50
Invoices	75	P and L	83
	<u>£133</u>		<u>£133</u>
Feb 1 Prepaid	50		

<i>General Expenses (17)</i>	
Jan. 31	Jan. 31
Petty Cash 43	Stamps
Invoices 790	Stock c/d 460
	P and L 373
<u>£833</u>	<u>£833</u>
Feb. 1 Balance 460	

<i>Printing and Stationery (19)</i>	
Jan. 31	Jan 31
Petty Cash 4	P and L 132
- do - 18	
Invoices 110	
<u>£132</u>	<u>£132</u>

<i>Insurance (21)</i>	
Jan. 31	Jan. 31
Invoices 120	Prepaid 110
	P and L 10
<u>£120</u>	<u>£120</u>
Feb. 1 Bal. 110	

<i>Sundry Manufacturers (23)</i>	
Jan.	
Sales Vouchers 90	
- do - 100	
<u>£190</u>	

<i>Salaries (25)</i>	
Jan.	Jan 31
Bank 1,151	P and L 1,831
PAYE 150	
Pensions 220	
Accrued c/d 310	
<u>£1,831</u>	<u>£1,831</u>
	Feb. 1 Accruals b/d 310

<i>Repairs (18)</i>	
Jan.	Jan. 31
Petty Cash 35	P & L 285
Invoices 250	
<u>£285</u>	<u>£285</u>

<i>Rent and Rates Light and Heat (20)</i>	
Jan. 31	Jan 31
Invoices 1,550	Rent
	Prepaid 500
	Rates
	Prepaid 600
	P and L 450
<u>£1,550</u>	<u>£1,550</u>
Feb. 1	
Balance 1,100	

<i>Sales (22)</i>	
Jan. 31	Jan. 31
Returns c/d 135	Invoices 7,710
Trdg. a/c 17,892	Cash 10,127
	Vouchers 90
	- do - 100
<u>£18,027</u>	<u>£18,027</u>
	Feb 1
	Returns b/d 135

<i>Discounts (24)</i>	
Jan.	Jan.
Allowed per	Received per
Bank Bk. 330	Bank Bk. 435
P and L 105	
<u>£435</u>	<u>£435</u>

<i>Loan Interest (26)</i>	
Jan. 31	Jan. 31
Bal. c/d. 30	P and L 30
<u>£30</u>	<u>£30</u>
	Feb 1
	Accrual 30

<i>Bad Debts (27)</i>	
Jan. 31	Jan. 31
-Sundry Debtor 315	P and L 315
<u>315</u>	

Trial Balance as at 31 January

Notes	A/C No.	Dr.	Cr.	Adjustments	
				Dr.	Cr.
	Bank	8,321			
	Leasehold	18,000			
	Fittings	6,960		450	
8	Vehicles (2160-150)	2,010		120	
7	Stocks – Cost of	13,236		90	
	Sales				1,218
5	Debtors (10,210–4,850)	5,360			135
	Northern Finance		3,600		315
1	Creditors (19,492-9,460)		10,032	90	
4	Depn. Prov.: Lease		2,700		75
4	Fittings		1,530		62
4/5	Vehicles		650	450	30
	Capital		21,724		
	Petty Cash	20			
	Travel	67			
	Vehicle Expenses	133			50
6	General Expenses	833			460
	Repairs	285			
	Printing, Stationery	132			
	Postage and Telephone				
	Rent and Rates,				600
	Light and Heat	1,550			500
	Insurance	120			110
1	Sales		18,027	135	
	Sundry Manufacturers	190			
	Discounts		105		
	Salaries	1,151		680	
2	Loan Interest			30	
2	Interest Due				30
3	PAYE Due				150
3	Pensions Due				220
3	Salaries Due				310
4	Depreciation			167	
5	Bad Debts			315	
6	Trading Stamps			460	
7	Stock in Hand			1,218	
8	Loss on Veh. Sale			120	
	Ins. Prepaid			50	
	Rent and Rates			110	
	Prepaid			500	
	Prepaid			600	
		£58,368	58,368	£4,925	4,925

<i>Total</i>		<i>Trading & Profit</i>		<i>Balance Sheet</i>	
<i>Dr.</i>	<i>Cr</i>	<i>Loss A/c</i>		<i>Assets</i>	<i>Liabilities</i>
		<i>Dr.</i>	<i>Cr.</i>		
8,321				8,321	
18,000				18,000	
6,960				6,960	
1,440				1,440	
11,928		11,928			
4,910				4,910	
	3,600				3,600
	9,942				9,942
	2,775				2,775
	1,592				1,592
	230				230
	21,724				21,724
20				20	
67		67			
83		83			
373		273			
285		285			
132		132			
450		450			
10		10			
190	17,892		17,892		
	105		105	190	
1,831		1,831			
30		30			
	710				710
167		167			
315		315			
1,678				1,678	
120		120			
1,260				1,260	
<u>£58,570</u>	<u>58,570</u>	<u>15,791</u>			
	Profit	2,206			2,206
		<u>£17,997</u>	<u>17,997</u>	<u>42,779</u>	<u>42,779</u>

*Income Statement
for the Month of January*

Cost of Sales	11,928	Sales	17,892
Gross Profit	5,964		
	<u>£17,892</u>		<u>£17,892</u>
Travel	67	Gross Profit	5,964
Vehicle Expenses	83	Discounts	105
General Expenses	373		
Repairs	285		
Printing and Stationery	132		
Rent and Rates, Light and Heat	450		
Insurance	10		
Salaries	1,831		
Loan Interest	30		
Bad Debts	315		
Depreciation	167		
Loss on Vehicle Sale	120		
	<u>3,863</u>		
Net Profit	2,206		
	<u>£ 6,069</u>		<u>£ 6,069</u>

Gross Profit is 50% of cost. This agrees with profit margin on individual items. Proof that invoicing, stock recording and valuation is correct.

The depreciation calculation has been overstated by £4. ($\frac{1}{12}$ of £240 = £20) (p. 70) an audit of the accounts should reveal this error. If the error is not considered material the accounts would not be adjusted.

Balance Sheet as at 31 January

Fixed Assets	Cost	Depn.	Net
Leasehold Premises	18,000	2,775	15,225
Fittings	6,960	1,592	5,368
Vehicles	1,440	230	1,210
	<u>£26,400</u>	<u>4,597</u>	21,803
 Current Assets			
Stocks		1,678	
Debtors – Trade – 4,910 + 190		5,100	
Prepayments		1,260	
Bank		8,321	
Cash		20	
		<u>£16,379</u>	
 Less Current Liabilities			
Creditors – Trade	9,942		
Accrued Charges	710		
		<u>10,652</u>	
Working Capital or Net Current Assets			<u>5,727</u>
			27,530
Less Loan			<u>3,600</u>
Net Assets			<u>£23,930</u>
 Proprietor's Interests			
Capital, 1 Jan.		21,724	
Net Profit for Month		<u>2,206</u>	
			<u>£23,930</u>

In addition to the accounts showing the operating results a statement should be prepared indicating the manner in which the business has obtained and used its funds. This statement will reconcile profit earned with movement in cash and indicate the extent to which business expansion has been financed by internal profits.

		<i>Note</i>
Bank and Cash Balances at Commencement of Year	£4,240	
Bank and Cash Balances at End of Year	<u>8,341</u>	
	<u>£4,101</u>	
<i>Funds Statement</i>		
Net Profit per Income Statement	£2,206	
Add Depreciation	167	1
Loss on Sale of Vehicle	<u>120</u>	
Increase in Funds from Trading	2,493	
Proceeds from Vehicle Sale	150	
Increase in Creditors	<u>9,042</u>	2
Total Funds Generated	11,685	
Less Fittings Purchased	2,400	3
Vehicles Purchased	1,200	
Stock Increase	124	4
Debtors Increase	<u>3,860</u>	5
	<u>7,584</u>	
Increase in Bank and Cash	<u>£4,101</u>	6

Notes

(1) Depreciation and loss on vehicle are added to profit as neither of these have resulted in cash leaving the business. They are book entries only, transferring capital costs to revenue. The profit on cash basis was £2,493, subsequently reduced by the depreciation charge and the loss arising on the vehicle sale.

(2) The increase in creditors is £1,315 + 120 + 175 (1,610) at commencement of month and £9,942 + 710 (10,652) at the end of month and represents cash held back by the business. This enabled the business to purchase capital equipment and stock and extend the credit period to debtors.

(3) Fittings and vehicles purchased – as per accounts.

(4) Stock increase = £1,554 – £1,678

(5) Debtors at commencement £2,500
 at end (5,100 + 1,260) 6,360

Cash not received by business £3,860

(6) The increase in available cash is greater than the profit earned, due mainly to the considerable increase in creditors, funds not paid away and the increase in debtors, funds not received.

(7) The statement draws attention to what becomes a cash problem – the funds required to pay creditors. (£8,341 of cash to pay £10,652 creditors or the increase in creditors £9,042 is twice the increase in available cash £4,101.)

Subsidiary Records

Personal Accounts – Debtors

D. Hyams (1)

Jan. 1 Balance	700	Jan. 25 Bank	350
		Bad Debt	315
		Balance	35
	<u>£700</u>		<u>£700</u>
Feb. 1 Balance	35		

W. Jones (2)

Jan. 1 Balance	1,200	Jan. 1 Cash and Discount	500
Jan. 20 Sales	2,565	Jan 9 – do –	700
		Jan 31 Balance	2,565
	<u>£3,765</u>		<u>£3,765</u>
Feb. 1 Balance	2,565		

A. Williams (3)

Jan. 1 Balance	600	Jan. 1 Cash	600
Jan. 3 Sales	645	Jan. 31 Balance	645
	<u>£1,245</u>		<u>£1,245</u>
Feb. 1 Balance	645		

C. Arthur (4)

Jan. 24 Sales	4,500	Jan. 11 Cash	2,700
		Balance	1,800
	<u>£4,500</u>		<u>£4,500</u>
Feb. 1 Balance	1,800		

Personal Accounts – Creditors

British Rail (1)

	Jan. 1 Balance	75	
	Jan. 22 Invoices	70	
			£145

A. Jackson (2)

Jan. 31 Bank	300	Jan. 1 Balance	300
Balance	250	Jan. 12 Invoices	250
			£550
	£550	Feb. 1 Balance	250

Printers (3)

Jan. 22		Jan. 1 Balance	690
Cash		Jan. 2 Invoices	330
Discount	690		
Jan. 31			
Balance	330		
	£1,020		£1,020
		Feb. 1 Balance	330

Charles Ltd. (4)

Jan. 22		Jan. 2	
Cash		Invoices	1,392
Discount	930	Jan. 19	
Jan. 31		Invoices	10,290
- do -	7,290		
	8,220		
Balance	3,462		
	£11,682		£11,682
		Feb. 1	
		Balance	3,462

Post Office (5)

	Jan. 5 Invoices	30
--	-----------------	----

SEGAS (6)

	Jan. 5 Invoices	2,150
--	-----------------	-------

Trading Stamp Co. (7)

	Jan. 5 Invoices	720
--	-----------------	-----

Motor Mart (8)

	Jan. 17	
	Invoices	1,275

Town Property (9)

	Jan. 19	
	Invoices	1,470

Transit Insurance (10)

	Jan. 31 Invoices	120
--	------------------	-----

SEEB (11)

Jan. 31		Jan 1 Balance	250
Cash	250	Jan. 31 Invoices	80
Balance	80		
	£330		£330
		Feb. 1	80

The preceding balances total £5,045 and £10,032, agreeing with the control accounts.

Stock Record 1

<i>Description</i>		<i>Code</i>		<i>Price</i>	
Televisions		902		£90	
Date	Reference	Delivered	Despatched	Balance	Value
Jan. 1				5	
Jan. 3	D/N*		3	2	
Jan. 3	GRN†	81		83	
Jan. 5	D/N		20	63	
Jan. 19	D/N		25	38	
Jan. 20	D/N		15	23	
Jan. 24	D/N		20	3	£270

*D/N Sales Invoice.

† GRN Goods Received.

Stock Record 2

<i>Description</i>		<i>Code</i>		<i>Price</i>	
Radios		975		£60	
Date	Reference	Delivered	Despatched	Balance	Value
Jan 1.				16	
Jan. 2	GRN	12		28	
Jan. 5	D/N		17	11	
Jan. 5	GRN	50		61	
Jan. 19	D/N		20	41	
Jan. 20	D/N		6	35	
Jan. 24	D/N		20	15	£900

Stock Record 3

<i>Description</i>				<i>Code</i>	<i>Price</i>
Hairdryers				1214	£16
<i>Date</i>	<i>Reference</i>	<i>Delivered</i>	<i>Despatched</i>	<i>Balance</i>	<i>Value</i>
Jan. 1				9	
Jan. 2	GRN	42		51	
Jan. 3	D/N		10	41	
Jan. 5	D/N		15	26	
Jan. 19	D/N		23	3	£48

Depreciation

Sales – Vehicles

<i>Cost</i>	<i>Depn. rate</i>	<i>Annual charge</i>	<i>Age at sale</i>	<i>Total depn.</i>	<i>Book value</i>	<i>Proceeds</i>	<i>Profit/ (Loss)</i>	<i>Depn. this period</i>
£720	25%	£180	2½ yrs.	£450	£270	£150	(£120)	Nil

Period Charges

		<i>Rate</i>	<i>Annual charge</i>	<i>Charge this period</i>
Premises	Balance £18,000	5%	£900	75
Fittings	Balance £ 4,560	10%	£456	£38
	Purchases 2,400		240	24
	<u>£ 6,960</u>			62
Vehicles	Balance £ 960			
	Sales 720			
	<u>240</u>	25%	60	5
	Purchases 1,200		300	25
	<u>£ 1,440</u>			30
			Total for Period	<u><u>£167</u></u>

Where the Trial Balance does not agree it will be necessary to undertake a systematic check of all the work carried out since the previous Trial Balance was prepared in order to identify the errors.

These errors may consist of: (1) incorrect additions in one or more accounts; (2) incorrect extraction of balances from one or more accounts; (3) incorrect postings from summary sheets as between two accounts; (4) omission of balances from the Trial Balance.

During the course of checking for the difference on the Trial Balance other errors may be located which, however, do not create a difference. These will include (1) complete omission of an entry in the summary sheet or posting to ledger; (2) treatment of capital expense (purchase of new vehicle) as revenue expense (motor vehicle running costs); (3) misposting as between two accounts of similar nature, plant for office equipment, heating for telephone.

When all errors have been located and adjustments to the Trial Balance carried out, including the accruals prepayments, etc., the ledger accounts must incorporate the changes before commencement of the new financial period.

The following is a further example, showing adjustments usually made to a Trial Balance, together with accounting entries, to give effect to the adjustments.

Sales		18,355
Purchases	12,556	
Stock at Commencement	3,776	
Salaries	2,447	
Motor Expenses	664	
Rent and Rates	456	
Insurance	146	
Light and Heat	665	
Vehicles	2,400	
Fittings	700	
Debtors	4,577	
Creditors		3,114
Bank	4,032	
Drawings	2,050	
Capital		13,000
	<u>£34,469</u>	<u>£34,469</u>

Additional Information:

- (1) Stock at end of year, £5,918.
- (2) Expenses owing: Motor, £56; Rent, £40
- (3) Expenses in advance: Rates, £76; Insurance, £30
- (4) Bad Debt, £150. A provision for further possible £80 is required.
- (5) Depreciation: Fittings, 10%; Vehicles, 25%.
- (6) Salaries outstanding, £75.

Note alternative method of calculating cost of sales.

(1) To arrive at cost of sales add opening stock to purchases, deduct closing stock:

Cr. Stock	Dr. Purchases	£3,776
Cr. Purchases	Dr. Stock	£5,918

(2) Outstanding charges will increase expenses:

Dr. Motor Expenses	£56
Dr. Rent	£40
Cr. Creditors	£96

(3) Expenses on Trial Balance include rates for a subsequent period; these must be eliminated:

Cr. Rates	£76
Cr. Insurance	£30
Dr. Debtors	£106

(4) The Bad Debt incurred reduces Debtors and creates an expense. The possibility of further Bad Debts means the creation of a reserve. Debtors not reduced until Bad Debts actually incurred although Balance Sheet will show net Debtors:

Dr. Bad Debts (£150 + £80)	£230
Cr. Debtors	£150
Cr. Bad Debt Provision	£80

(5) Depreciation charge is £670 - 10% of Fittings:
(£700) = £70; 25% of £2,400 (Vehicles) = £600

A charge must be made against profits to create the Provisions:

Dr. Depreciation (Profit and Loss a/c)	£670
Cr. Depreciation Provision – Fittings	£70
Cr. Depreciation Provision – Vehicles	£600

(6) Salaries not having been paid for some part of the last month creates an additional expense:

Dr. Salaries	£75
Cr. Creditors	£75

Trial Balance

	Original		Adjustments		Totals		Trading and Profit and Loss A/c		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Assets	Liabilities
Sales		18,355				18,355		18,355		
Purchases	12,556		3,776	5,918	10,414		10,414			
Stock	3,776		5,918	3,776	5,918				5,918	
Salaries	2,447		75		2,522		2,522			
Motor Expenses	664		56		720		720			
Rent and Rates	456		40	76	420		420			
Insurance	146			30	116		116			
Light and Heat	665				665		665			
Vehicles	2,400				2,400				2,400	
Fittings	700				700				700	
Debtors	4,577		106	150	4,533				4,533	
Creditors		3,114		75+96		3,285				3,285
Bank	4,032				4,032				4,032	
Drawings	2,050				2,050				2,050	
Capital		13,000				13,000				13,000
Bad Debts			230		230		230			
Bad Debt Prov.				80		80				80
Depreciation			670		670		670			600
Dpn. Prov. Vehicles				600		600				600
Fittings				70		70				70
	34,469	34,469	£10,871	10,871	35,390	35,390	15,757			
Profit or (Loss)							2,598			2,598
					£18,355	18,355			19,633	19,633

The Final Accounts would be prepared in the normal manner.

*Trading and Profit and Loss Account
for the Year Ending 31 December*

Sales		18,355
Cost of Sales		<u>10,414</u>
Gross Profit		7,941
Salaries	2,522	
Motor Expenses	720	
Rent and Rates	420	
Insurance	116	
Light and Heat	665	
Bad Debts	230	
Depreciation	<u>670</u>	
Net Profit		<u>£ 2,598</u>

Balance Sheet as at 31 December

	Cost	Deprn.	Net
Fixed Assets			
Fittings	700	70	630
Vehicles	2,400	600	1,800
	<u>£3,100</u>	<u>670</u>	2,430
Current Assets			
Stocks		5,918	
Debtors and Prepayments	4,533		
Less Bad Debt Provision	<u>80</u>		
Bank		4,453	
		<u>4,032</u>	
		£14,403	
Less Current Liabilities			
Creditors and accrued Charges		<u>3,285</u>	
Net Current Assets or Working Capital			11,118
			<u>£13,548</u>
Proprietor's Interest			
Capital, 1 January		13,000	
Add Profit for Year		<u>2,598</u>	
		15,598	
Less Drawings		<u>2,050</u>	<u>£13,548</u>

The previous examples have shown an agreed Trial Balance. The following example indicates the procedure where a difference arises and the manner in which corrections are carried out. When the Income Statement has been prepared and a Net Profit transferred to the proprietor's capital, and errors subsequently located, the profit will have to be adjusted as will the respective items on the Balance Sheet.

<i>Trial Balance</i>				
	Dr.	Cr.	Errors Corrected	
			Dr.	Cr.
Proprietor's Interest		11,215		
Bank Charges	85		75	
Drawings	620			
Shop Fittings	5,300			
Vehicles	1,800			
Provision for depn.				
Fittings		2,700		
Vehicles		450		
Salaries	2,520			
Rent and Rates	1,815			
Light and Heat	1,760			64
Motor Vehicle Expenses	1,592			
Discounts	143			30
Purchases and Sales	6,492	9,358	83	40
			10	
Bank Balance	192			384
Stock at Commencement	313			
Debtors and Creditors	1,359	541	40	83
General Expenses			120	
	<u>£23,991</u>	<u>£24,264</u>	<u>£328</u>	<u>£601</u>

Note: Original difference £24,264 – 23,991 = 273
 Corrections £601 – 328 = 273

The following errors were subsequently located:

- (1) Balance on the Sales Account overstated £10.
- (2) Discount received £15 had been posted as a debit to discount allowed.
- (3) Purchases £40 returned to a supplier had not been recorded in the books.
- (4) Bank Charges £75 entered in the Cash Book had not been posted to the expense account.
- (5) Goods returned by a customer £83 had not been recorded.
- (6) The accrued charge of £64 on Light and Heat at end of previous financial period had not been brought forward.
- (7) The Balance at bank was, in fact, an overdraft.
- (8) The balance on General Expenses £120 had been omitted.

Notes:

(1) Dr. Sales	£10	Balance to be reduced. This is overstated.
(2) Cr. Discount	£30	The expense is overstated as a result of a debit entry of £15 in error for a credit entry.
(3) Dr. Supplier	£40	As a result of the omission both purchases and creditors are overstated.
Cr. Purchases	£40	
(4) Dr. Bank Charges	£75	The expense is understated due to charge not being entered in the account.
(5) Dr. Sales	£83	Both the revenue account (Sales) and the asset account (Debtors) are overstated as a result of omitting the entry.
Cr. Debtors	£83	
(6) Cr. Light and Heat	£64	The balance on the expense account is overstated due to the failure to bring down the opening credit balance.
(7) Cr. Bank balance	£384	The balance shown of £192 on the Trial Balance must be eliminated and the credit balance £192 inserted.
(8) Dr. General Expenses	£120	The expenses have been incurred and posted to the account but the balance was not included when the Trial Balance was extracted.
Net Profit adjustments:		
Add (2) £30 Discount		Expense overstated.
(3) £40 Purchases		Costs overstated — goods returned.
(6) £64 Light and Heat		Expense overstated.
Less (1) £10 Sales		Revenue overstated.
(4) £75 Bank Charges		Expense omitted.
(5) £83 Sales		Revenue overstated.
(8) £120 General Expenses		Expense omitted.

Questions

3.1 The following Trial Balance was extracted from the books of Mr Jackson, a sole trader, at the end of his last financial year at 30 June, 19–2:

	<i>Dr.</i>	<i>Cr.</i>
Debtors	12,430	
Purchases	83,372	
Drawings	2,200	
Cash in Hand	632	
Wages	14,624	
Capital at 1 July 19–1		24,188
Rates, Heating, etc.	864	
Sales		109,636
Telephone charges	372	
Bank Interest	224	
Bank overdraft		4,292
Freehold Premises, at cost	19,200	
Furniture and Fixtures, at cost	4,000	
Stock at 1 July, 19–1	10,434	
Creditors		9,836
Provision for Depreciation on Furniture and Equipment, at 1 July, 19–1		400
	<u>£148,352</u>	<u>£148,352</u>

The following information was also obtained:

- (a) Depreciation is at 10% p.a. on cost of Furniture and Fixtures.
- (b) Accrued expenses were: wages £240; heating £86.
- (c) Rates were prepaid to the extent of £36.
- (d) Stocks at 30 June 19–2 were valued £8,214 at cost and £9,017 at net realisable value.

You are required to prepare the Profit and Loss Account and the Balance Sheet of the firm.

3.2 W. Ashling, trading as Ash Ltd, showed the following balances in their books at 1 October:

Leasehold Shop £8,000; Fittings £4,500; Vans £800; Stocks £1,070; Bank £4,200; Loan (City Bank Ltd.) £4,200; Comm. Inl. Rev. £120; Ins. Co. re Pensions Cost £175. Depn. Provisions: Premises £2,000; Fittings £1,360; Vehicles £500. Creditors £1,315; Debtors £2,500.

You are informed that Stocks consisted of 5 Radiograms @ £90 each; 9 Sink Units @ £60; 16 Coffee Sets @ £5.

Debtors comprised: C. Arthur £500, D. Hyams £700, W. Jones £1,200, A. Williams £100.

Creditors consisted of: British Rail £75, A. Jackson £300, Printers Ltd £690, SEEB £250.

You are required to:

- (A) Show calculation of Capital at beginning of month.
- (B) Open the necessary ledger accounts to record the above balances.
- (C) From the information given below you are to write up:
 - (1) Purchase, Expenses, Sales and Petty Cash Journals.
 - (2) Stock Cards.

- (3) Bank Book.
- (4) Open the necessary personal and expense accounts.
- (5) Prepare a Trial Balance.
- (6) Taking into account the additional information given at month end, prepare a Trading and Profit and Loss Account for the month of October and a Balance Sheet as at 30 October.

Invoices received from suppliers of goods and services:

Oct. 2	Printers Ltd	Letterheads £80
	Furnishers Ltd	12 Sink Units @ £60 each £720
	Charles Ltd	42 Coffee Sets @ £5 each £210
Oct. 5	GPO	Telephone charges £30
	SEGAS	2 Heaters (for internal use) £150
	Trading Stamp Co.	Cost of Stamps supplied £720
Oct. 12	British Rail	Carriage charges £70
	Wholesale Electrical	81 Radiograms @ £90 £7,290
	Furnishers Ltd	50 Sink units @ £60 £3,000
	Kingston Motors	Cost of new vehicle £1,115 incl. Tax and Ins. £75 (to 31 Dec.)
Oct. 18	Town Property	Rent 3 months to 31 Dec. £750
	Surbiton Stationery	Typewriter £80
	Traders Insurance Co.	Fire Insurance premium for 1 year £120. Deposit on Cash in transit £20.
Oct. 24	SEGAS	Lighting £30
	SEEBOARD	Power charges £80
Oct. 28	Tolworth Garage	Vehicle Repairs £25
	Surbiton Stationery	Packing Material £460
	A. Jackson	Building Repairs £250.

Invoices despatched to customers:

Oct. 3	C. Arthur	3 Radiograms @ £135	£405
Oct. 5	W. Jones	10 Coffee Sets @ £7.50	75
Oct. 9	A. Mason	6 Sink Units @ £90	540
Oct. 13	E. Evans	15 Radiograms @ £135	2,025
Oct. 18	A. Williams	20 Radiograms @ £135	2,700
Oct. 22	C. Arthur	20 Sink Units @ £90	1,800

Petty Cash Transactions:

Oct. 2	Received £160 from Bank
Oct. 3	Paid £10 Travelling
Oct. 9	Paid £25 to Van Driver for Petrol and Oil
Oct. 12	Paid £15 Laundry
Oct. 13	Paid £28 Sits. Vac. Adverts Local Newspaper
Oct. 18	Paid £15 Surbiton Stationery sundry stationery supplies.
Oct. 24	Paid £20 H. Jackson repairs.
Oct. 30	Paid £10 Laundry.

Bank Transactions – Receipts:

Oct. 2	C. Arthur £475	Discount £25
Oct. 6	W. Jones £1,140	Discount £60
	A. Williams £100	

CHAPTER 4

Financial Control

As a business grows in size and the proprietor becomes removed from the day-to-day working it becomes necessary to prepare the records in such a manner that control over the general operations of the organisation can still be maintained.

Reference to the previous chapter will show that the accounts of the individual debtors and creditors had in fact been removed from the general ledger and replaced by total or control accounts, on the basis that the proprietor may not be concerned with the operation of the individual accounts but will be more concerned with the overall state of the relationship between debtors and creditors balances in total. The responsibility for control of the individual accounts has been passed to another section. At the same time, with the routine work having been removed management is in a position to oversee the general situation and plan the strategy of the business, thus fulfilling its role as decision-maker.

Control or total accounts have already been operated in respect of the various classes of Fixed Assets and their accumulated depreciation and also in the case of stocks.

The ledger accounts for Fixed Assets have indicated the total cost of each class without reference to the type of individual asset. Such information has been recorded in the Plant Register, a ledger containing a record of each individual piece of fixed asset by class, together with details of the annual and accumulated charge for depreciation. Periodically the amounts on the Plant Register are listed and agreed with the balances on the respective asset and depreciation accounts.

Differences between the balance on the control account and the individual Plant Registers are located and corrected, using the same technique as when agreeing the Trial Balance and Debtor and Creditor controls.

With regard to stocks, a record is maintained of the quantities and values of each type of stock on individual cards, these accounts forming the stores ledger. As required the balances are listed and the total agreed with the balance on the stock account.

When the business is converted to a limited company and the capital is subscribed by numerous individuals, the capital account balance will be represented by the balance in a ledger referred to as the Register of Members. This ledger, containing an account for each person who has placed funds in the

business, shows the amount subscribed. The individual balances are extracted when required and agreed with the balance on the control – the Share Capital Account.

Control or total accounts will be maintained in respect of Stocks despatched to Branches, in order that a check can be maintained on the selling prices and the general efficiency of the branch in regard to stock and cash control.

Examination questions on the control topic are generally confined to the preparation and correction of debtor and creditor control accounts. The basic point concerning control or total account is: if an entry is made in the account of the individual debtor or creditor then an entry is also made in the total account; if the transaction does not require an entry in the debtor or creditor account then no entry is required in the total amount.

<i>Debtors Control Account</i>	
Opening Balance Sales on credit Cash Refunds _____	Cash received Discounts allowed Goods returned by customers Bills receivable Bad debts written off Contra items with creditors ledger Balance c/d _____
<i>Creditors Control Account</i>	
Cash Paid Discounts received Goods returned Contra items with debtors Balance c/d _____	Opening balance Cash refunds Goods purchased on credit _____

The control accounts act as a check on the accuracy of the posting of individual personal accounts and also allow overall financial control to be carried out without reference to individual accounts.

The purpose of total accounts is to control the operations of office staff operating the individual accounts, to segregate the routine work, to speed up the preparation of management information and to eliminate a considerable amount of the routine checking that is necessary when separate Sales and Purchases Ledgers have not been created. Where the Trial Balance on the General Ledger does not agree it would only be necessary to check the total postings to the control. It is only necessary to check the entries in the individual accounts when the totals of these balances do not agree with the balance on the control.

<i>Types of Error</i>	<i>Corrections</i>
(1) Sales summary overstated £100	No effect on personal account. Cr. Control; Dr. Sales. The individual accounts were correctly posted.
(2) A debtor omitted £45	No adjustment to Control. Entries were correct. Add balance to list.

- | | |
|--|--|
| (3) Purchase invoice £80
not posted but included
in summary total. | No adjustment to Control.
Total posting was correct.
Add £80 to balance on creditors
account. |
| (4) Return by T. Smith £40
posted to T. Smithson. | Adjust personal accounts only.
This will not have created a differ-
ence. |
| (5) Cheque dishonoured £92
not entered in Cash Book. | Will require an entry in debtors
account and also in Control. Will
not have been one of the reasons
for a difference. |
| (6) Sales invoice £180
posted to personal a/c as £108 | No effect on Control.
Total posting was correct.
Add £72 to debtors balance. |
| (7) Purchase invoice summary £2,120
posted as £2,210 to Control. | No adjustment to personal account.
Invoices had been posted correctly.
Dr. Control £90 purchases over-
stated. |

The control accounts can be divided into smaller units for ease of administration, e.g. debtors A–J, K–N, O–Z. From the following details prepare the control accounts:

At 1 April		<i>Notes</i>
Creditors ledger balances	3,282	
Debtors ledger balances	8,884	
Provision for bad debts	177	
Totals for April		
Sales invoices sent	10,322	
Purchases invoices received	9,389	
Returns to suppliers	528	
Returns from customers	280	
Allowances by suppliers	89	1
Allowances to customers	23	
Bad debts written off	254	2
Receipts for cash sales	987	3
Bad debts previously written off, now recorded	18	4
Interest charged on customer's overdue account	3	
Cash paid to suppliers	9,325	
Cash received from customers	9,873	
Cash discount allowed	89	1
Cash discount received	183	1
Dishonoured cheque included in total cash received from customers (above)	98	
Cash discount which had been allowed on dishonoured cheque (above)	2	
Payments to suppliers for cash purchases	1,231	3

At 30 April

Contra item: B. Jones is both a customer and a supplier. In the purchases ledger he has a balance of £22 and in the sales ledger a balance of £56.	5
A net balance is to be shown.	
The account of A. Brown (a customer) has a credit balance of :	27
Provision for bad debts	250
	6

The control account balance indicates the indebtedness of debtors or the amount due to creditors. In practice it is possible that amounts may be due by debtors as a result of overpayments and creditors may be due to make refunds.

Such balances will only be seen when the list of individual debtors and creditors is prepared. The balance on the control account will then be adjusted in order to show the gross value of debtors and creditors.

Debtors Control

Balance 1 April	8,884	Goods returned	280
Sales Invoices	10,322	Discount allowed	23
Interest on overdue accounts	3	Bad debts written off	254
Cheque dishonoured	98	Cash received	9,873
Cheque dishonoured, discount disallowed	2	Cash discount	89
Balance c/d	27	B. Jones Contra	22
	<u>£19,336</u>	Balance c/d	8,795
Balance b/d	8,795		<u>£19,336</u>
		Balance b/d	27

Creditors Control

Goods returned	528	Balance 1 April	3,282
Discount received	89	Purchase invoices	9,389
Cash paid	9,325		
Cash discount	183		
B. Jones Contra	22		
Balance c/d	2,524		
	<u>£12,671</u>	Balance c/d	<u>£12,671</u>
			2,524

Provision for Bad Debts

Debts written off	254	Balance 1 April	177
Balance c/d	250	Cash bad debts recovered	18
	<u>£504</u>	Profit and Loss A/c	309
			<u>£504</u>
		Balance b/d	250

Notes:

(1) Allowances to customers include such items as trade discounts on bulk purchase, whereas the cash discount is for prompt settlement of invoices, e.g. 2½% for payment within seven days of invoice.

(2) The bad debts are written off against the provision account.

(3) Receipts for cash sales and payments for cash purchases do not affect the debtors or creditors and are ignored in the control accounts.

(4) The bad debt previously written off, now recovered, is credited to the bad debt provision account. No adjustment in the debtors control is necessary as the particular customer's accounts had been written down to a nil balance.

(5) Where an individual is both a customer and a supplier it may be necessary to offset the indebtedness and leave the net balance in the appropriate account. In this case B. Jones is a debtor for £56 - £22 = £34.

(6) Where credit balances appear on a debtors ledger and debit balances appear on a creditors ledger it is necessary to show the gross amounts of debtors and creditors on the Balance Sheet:

Creditors per Creditors ledger	2,524
Creditors per Debtors ledger	27
Balance per Balance Sheet	<u>£2,551</u>

Branch Accounts

A firm which has branches either within the UK or abroad is faced with the problems of maintaining, management control, branch efficiency and profitability and stock security. These may be overcome by (1) maintaining records at the head office and either supplying goods at selling price or at cost price; (2) having the branch maintain its own set of books.

Goods supplied at selling price

Where goods are supplied to a branch at a price greater than cost it is necessary to create a provision for unrealised profit on stock at the branch which has not been sold. The entries for a non-accounting branch would be:

Dr. Branch Stock a/c
Cr. H.O. Purchases
Cr. Provision unrealised profit

The cost of the goods and the expected profit on sale

Cr. Branch Stock a/c	The value of goods sold
Dr. Cash/Debtors, etc.	
Dr. Provision for unrealised profit	Profit on goods sold by the branch
Cr. Profit and Loss a/c	

Where several branches are operated the profit on goods sold could be credited to a specific branch account, whilst the branch expenses could be charged to that account; the resulting difference would be the profit or loss of the particular branch, which would be transferred to the main Profit and Loss Account. This method is useful where the head office wish to maintain strict control over the value of branch stock.

A firm has a branch and goods are invoiced at selling price which is cost plus 25%. All expenses are paid by the head office and the branch remits all cash received. A summary of the transactions are:

Stock 1 Jan. Sales Price	12,500	Cash received from debtors	33,000
Stock 31 Dec. Sales Price	15,000	Goods received from H.O.	91,000
Debtors 1 Jan.	7,000	Rent	4,000
Debtors 31 Dec.	9,000	Wages	3,400
Cash sales for the year	54,000	Sundry expenses	800
Credit Sales	35,000		

The accounts would appear as follows:

Branch Stock Account (Selling Price)

Balance 1 Jan.	12,500	Cash Sales	54,000
From H.O.	91,000	Credit Sales	35,000
Difference transferred to Branch a/c	500		
	<u>£104,000</u>	Balance 31 Dec.	15,000
Balance	£15,000		<u>£104,000</u>

Goods to Branch or H.O. Purchases Account (Cost)

		Branch Stock	72,800
<i>Branch Debtors</i>			
Balance 1 Jan.	7,000	Cash	33,000
Credit Sales	35,000	Balance 31 Dec.	9,000
	<u>£42,000</u>		<u>£42,000</u>
Balance	9,000		

Provision for Unrealised Profit

		Balance 1 Jan.	
		$\frac{25}{125} \times 12,500 =$	2,500
Profit to Branch a/c	17,700	Branch Stock	
		$\frac{25}{125} \times 91,000 =$	18,200
Balance 31 Dec.			
$\frac{25}{125} \times 15,000$	3,000		
	<u>£20,700</u>		<u>£20,700</u>
		Balance	<u>£3,000</u>

Branch Profit and Loss Account

Wages	4,000	Profit or Sales	17,700
Rent	3,400		
Sundry	800	Difference in Stock	500
Profit to Profit and Loss a/c	10,000		
	<u>£18,200</u>		<u>£18,200</u>

Notes:

(1) There is a difference, on the stock control account, of £500 which should be investigated. This could be credited to a suspense account where inaccuracies of stocktaking are suspected, or credited to the Branch Profit and Loss Account where it has resulted from increased sales prices.

(2) The provision for unrealised profit is deducted from the Branch Stock to reduce it to cost on the Balance Sheet.

(3) The Goods to Branch Account, which is at cost, is transferred to the Head Office purchases or stock account.

Self-accounting Branches require a similar procedure to non-accounting branches with the exception that all transactions affecting the branch are recorded in a Branch Current Account in the Head Office books and a Head Office Current Account in the branch books. It is essential to ensure that the balances on the current accounts agree before the Profit and Loss Account and Balance Sheet of the firm are prepared. The Head Office Account in the branch books is the equivalent of the capital invested in it by the Head Office and represents the Fixed Assets, Current Assets and Liabilities of the Branch.

A company's head office is in London and it has a branch in Glasgow. All goods are purchased by the head office and invoiced to the branch at cost price plus 20%. The branch keeps its own complete set of books. The following are the Trial Balances as at 31 December:

	<i>London</i>	<i>Glasgow</i>
Land and Building at cost	84,528	24,380
Plant and Machinery at cost	57,367	18,273
Goodwill at cost	20,000	—
Stock at cost	22,431	—
Stock at invoiced price		12,840
Debtors	10,515	5,777
Balance at Bank	3,464	1,760
Current A/c with Branch	45,705	
	<u>£244,010</u>	<u>£63,030</u>
Share Capital	173,500	—
General Reserve	5,000	—
Creditors	4,137	1,131
Profit and Loss a/c 1 January	12,972	
Depreciation to date Land and Buildings	1,954	1,246
Depreciation to date Plant	4,252	1,948
Provision for taxation	18,000	—
Profits for year	24,195	13,946
Current A/c with Head Office		44,759
	<u>£244,010</u>	<u>£63,030</u>

Subject to the items mentioned below, and to the appropriation of profits, all the necessary closing entries have been made.

The difference between the current accounts arises from (1) £400 remitted by the branch on 31 December which was not received by head office until 2 January; (2) £546 for goods invoiced and despatched to the branch by head office on 30 December which were not received by the branch until 4 January.

Before the accounts can be prepared the Current Accounts must agree and it is necessary to make the following adjustments:

Head Office Trial Balance	
Dr. Cash in Transit	400
Cr. Current Account	400
Branch Trial Balance	
Dr. Goods in Transit	546
Cr. Current Account	546

The Head Office Current Account with the branch will be 45,705 - 400 = £45,305.

The Branch Current Account with the Head Office will be 44,759 + 546 = £45,305.

The stock which is held by the branch is valued at the invoice price which is 20% above cost price. A provision for unrealised profit must be created:

Dr. Head Office Profit and Loss a/c	$\frac{20}{120} \times \text{£}12,840 + 546$
Cr. Provision for unrealised profit	<u><u>= £2,231</u></u>

The Balance Sheet can be drawn up in the usual manner, combining both the head office and branch assets and liabilities.

Balance Sheet

	<i>Cost</i>	<i>Depre- ciation</i>	
Land and Building	108,908	3,200	105,708
Plant and Machinery	75,640	6,200	69,440
Goodwill			20,000
Stock (22,431 + 12,840 + 546 - 2,231)		33,586	
Debtors		16,292	
Cash (3,464 + 1,760 + 400)		5,624	
		55,502	
Creditors	5,268		
Taxation	18,000	23,268	32,234
			<u><u>£227,382</u></u>
Share Capital			173,500
General Reserves			5,000
Profit and Loss Account 1 Jan.		12,972	
Profit for Year		35,910	48,882
			<u><u>£227,382</u></u>

The cash in transit and stock in transit (reduced to cost) could be shown as separate current assets if this is preferred.

Profit and Loss Account

Head Office Profit (24,195 - 2,231) =	21,964
Branch	13,946
	<u><u>£35,910</u></u>

Foreign Branches

Where a foreign branch is self-accounting the Trial Balance of the branch is normally sent to Head Office but will be in the local currency; it will be necessary to convert the various amounts into sterling. The procedure which may be adopted is as follows:

(1) Ensure the current accounts agree, i.e. that there are no goods or cash, etc., in transit. The balance in the Head Office books will therefore equal the balance in Branch Trial Balance. No currency rate need be applied.

(2) Convert Fixed Assets and Depreciation at the rate in force at time of purchase or at the fixed rate the firm uses.

(3) Current assets and liabilities at the rate in force at the Balance Sheet date.

(4) Remittances are converted at the actual rate received.

(5) The difference on the converted Trial Balance is a difference arising on exchange and this should be charged to the main Profit and Loss Account. It is not a loss chargeable to the foreign branch. An adjustment will be necessary in the current account in Head Office books.

(6) When considering the items which are included in the Profit and Loss Account either convert the income and expenses at an average rate for the period and calculate the profit or loss in sterling, or prepare the Profit and Loss Account in the local currency and convert the result at the fixed or average rate.

Hire Purchase Control

A further form of control arises when a trading company's activities consist of selling goods on an instalment basis. The company will create an account for each customer but will mainly be concerned with the total value of outstanding transactions and the extent to which profit should be taken in a financial period.

Under the terms of a Hire Purchase Agreement the goods are hired to the recipient and then at the end of the contract the title in the goods passes to the buyer, whereas under an agreement to pay by instalments (a credit sale) the title of the goods belongs to the recipient from the commencement of the agreement.

Most firms do not finance their hire purchase sales but sell the contract to a finance house. The regulations concerning hire purchase contracts are governed by various Hire Purchase Acts of which the 1964 and 1965 Acts are the most important.

Goods costing £6,000, where sold on a credit sale basis for £11,000, are settled by a deposit of £3,000 and the balance by four annual instalments of £2,000. The cash sale price for these goods would be £9,000.

Cash sale price	9,000	The Profit could be taken as
Cost	6,000	A Gross Profit at point of sale plus interest earned to date.
Gross Profit	<u>3,000</u>	
Interest	2,000	B Total Profit as % of cash received:
Total profit	<u>£5,000</u>	

The entries would be:

Dr. Customer	Cash price of goods
Cr. Sales	
Dr. Cash	Deposit received
Cr. Customer	
Dr. Cash	Instalments paid
Cr. Customer	
Dr. Customer	Interest portion of each instalment
Cr Profit and Loss Account	

An alternative method of treatment is to take a portion of the total profit, i.e. the difference between the cost of goods sold and the total income expected, based on the actual cash received within the financial period. Using the same example as above:

£11,000 Total Income - £6,000 Cost = £5,000 Overall Profit
and 2 instalments paid by end of financial year.

Profit to be taken is:

Cash Received $\frac{£7,000}{£11,000}$ x Profit £5,000 = £3,182 approx.

The entries would be:

Dr. Customer Full amount of sale
Cr. H.P. Trading a/c

Dr. H.P. Trading a/c Cost of goods sold
Cr. Stock

Dr. Cash Cash received deposit
Cr. Customer and instalment

Dr. H.P. Trading a/c Proportion of profit earned
Cr. Profit and loss a/c

The balance on the H.P. Trading Account is the amount of the outstanding profit not yet earned and is deducted from the debtors on the Balance Sheet.

Where an instalment is due but not yet paid the proportion of the profit applicable to such instalment is taken and the unpaid instalment shown as a debtor.

On 1 January P. Ltd. commenced business selling goods on hire purchase. Under the terms of the agreements an initial deposit of 20% is payable on delivery, followed by four equal quarterly instalments, the first being due three months after the date of sale. During the year sales were made as follows:

	<i>Cost price (£)</i>	<i>H.P. Sales price (£)</i>
10 January	150	225
8 March	350	525
12 May	90	135
6 July	200	300
20 September	70	105
15 October	190	285
21 November	160	240

The goods sold in July were returned in September and eventually sold in November for £187 cash. All other instalments are paid on the due dates.

It may be assumed that: (A) gross profit and interest are credited to the Profit and Loss Account in the proportion that deposits and instalments received bear to hire purchase price; or (B) the cost is deemed to be paid in full before any credit is taken for gross profit and interest.

Workings

Assumption A

A	B	C	D		E	F	G	E-G
Cost	H.P. Sales price	(A-B) Profit	Deposit	Cash collected Inst	Total Balance	(D/B x C) Earned	(E-C) Unearned	Balance of Cost
Jan. 10	150	225	45	135	180	60	15	30
Mar. 8	350	525	105	315	420	140	35	70
May 12	90	135	27	54	81	27	18	36
July 6	200	300	60	187	247	47	-	-
Sept. 20	70	105	21	21	42	14	21	42
Oct. 15	190	285	57	-	57	19	76	152
Nov. 21	160	240	48	-	48	16	64	128
	£1,210	1,815	605		1,075	323	229	458

Assumption B

		(D-A)							
Jan. 10	Mar. 8	May 12	July 6	Sept. 20	Oct. 15	Nov. 21			
150	350	90	200	70	190	160	180	420	81
225	525	135	300	105	285	240	45	105	54
75	175	45	100	35	95	80	30	70	-
							47	45	9
							47	-	-
							-	35	28
							-	95	133
							-	80	112
							147	405	282
							1,075	687	147

Note: Goods repossessed

Cash collected on resale	60
Deposit	187
	<u>247</u>
Less Cost	200
Actual Profit	47
Anticipated Profit	100
Reduction of Gross Profit	<u>53</u>

Assumption A**Hire Purchase Trading Account**

Cost of Sales	1,210	Sales	1,815
Gross profit c/d (50% on cost)	605		
	<u>£1,815</u>		<u>£1,815</u>
Reduction of profit on goods repossessed and resold	53	Gross profit b/d	605
Provision for unrealised profit	229		
Net profit for year	323		
	<u>£605</u>		<u>£605</u>

Balance Sheet

Current Assets		
H.P. Debtors	687	
Less provision for unrealised profit	<u>229</u>	458

Assumption B**Hire Purchase Trading Account**

Cost of Sales	1,210	Sales	1,815
Gross profit c/d	605		
	<u>£1,815</u>		<u>£1,815</u>
Reduction of profit on goods repossessed and resold	53	Gross profit b/d	605
Provision for unrealised profit	405		
Net profit for year	147		
	<u>£605</u>		<u>£605</u>

Balance Sheet

Current Assets		
H.P. Debtors	687	
Less provision for unrealised profit	<u>405</u>	282

By using Assumption B a more prudent estimate of the profits earned results, since no profit is taken until the cost of goods sold has been recovered. Thereafter each instalment is 100% profit, whereas under assumption A part of the cost is recovered with every instalment and a proportion of the potential profit is also taken.

The asset on the Balance Sheet has been referred to as stock but under a credit sale agreement the asset would be debtors not yet due, because the title to the goods passed to the customer on the first payment and not on the last as in the case of hire purchase contracts. In the case of a credit sale agreement it may not be necessary to set up the provision for unrealised profit.

The main consideration concerning the purchaser is the treatment of interest on the money borrowed. One method of dealing with this is as follows:

Dr. Asset Account Cash price of item bought
Cr. H.P. Company a/c

Dr. H.P. Company a/c Cash payments
Cr. Cash Book

Dr. Interest paid a/c Interest element of each cash payment. This is
Cr. H.P. Company a/c eventually written off to the Profit and Loss Account.

H.P. Ltd acquired three excavators from AB Ltd under a credit agreement, which provided for a deposit of 10% with the balance to be paid in three annual instalments, the first of which was due one year after signing the agreement and payment of the deposit. The date of purchase, capital cost and annual repayments are:

<i>Excavator</i>	<i>Date of Acquisition</i>	<i>Capital Cost</i>	<i>Annual Repayment</i>
X	31 Dec. 19/–1	15,000	5,428
Y	31 Dec. 19/–1	15,000	5,428
Z	31 Dec. 19/–3	25,000	8,042

All instalments were paid on the due dates, except that when excavator Z was purchased the vendor agreed to take back excavator X on the basis that H.P. Ltd was to be credited with £5,000 in lieu of a deposit on excavator Z, and that a further payment, £5,100, was to be made in respect of excavator X with the instalment paid on 31 December.

The practice of H.P. Ltd was to capitalise the cash value of each excavator immediately on purchase, crediting it to the vendor. Each yearly instalment included interest at the rate of 10% per annum, calculated on the outstanding balance at the beginning of the year.

H.P. Ltd makes up its accounts to 31 December of each year and provides depreciation on excavators at the rate of 20% on reducing balance.

<i>Excavators Account</i>				<i>Vendor's Account (AB Ltd)</i>			
	X	Y	Z		X	Y	Z
31 Dec. 19-1	Cost	15,000		31 Dec. 19-3	Machinery Disposal Balance c/d	15,000	
31 Dec. 19-3	Cost		25,000				25,000
1 Jan. 19-4	Balance b/d	15,000	25,000			15,000	25,000
<i>Vendor's Account (AB Ltd)</i>							
31 Dec. 19-1	Cash Deposit Balance c/d	1,500		31 Dec. 19-1	Cash Price	15,000	
		13,500					15,000
31 Dec. 19-2	Cash Balance c/d	15,000		1 Jan. 19-2	Balance b/d P and L a/c interest	13,500	
		5,428				1,350	1,350
		9,422				14,850	14,850
31 Dec. 19-3	Cash Machinery Disposal Cash settlement Balance c/d	14,850		1 Jan. 19-3	Balance b/d	9,422	
		5,428					9,422
		5,100		31 Dec. 19-3	Cash Price P and L a/c interest Additional interest	942	
		10,528				164	
			5,000			10,528	25,000
31 Dec. 19-4	Cash Balance c/d	4,936	20,000	1 Jan. 19-4	Balance b/d P and L a/c interest	4,936	
		10,364	25,000			492	2,000
		5,428	8,042			5,428	22,000
			13,958				13,958
			22,000				

Machinery Disposal Account

31 Dec. 19-3	Cost of Excavator X	15,000	31 Dec. 19-3	Transfer, Depreciation Transfer, Trade-in-allowance P and L a/c	5,400 5,000 4,600
		<u>15,000</u>			<u>15,000</u>

Depreciation Account

	X	Y	Z	X	Y	Z
31 Dec. 19-3	Transfer, Machinery Disposal a/c Balance c/d	5,400		31 Dec. 19-2	P and L a/c	3,000
	<u>5,400</u>	5,400		31. Dec. 19-3	P and L a/c	2,400
		<u>5,400</u>				<u>5,400</u>
31 Dec. 19-4	Balance c/d	7,320	5,000	1 Jan 19-4	Balance b/d	5,400
		<u>7,320</u>	<u>5,000</u>	31 Dec. 19-4	P and L a/c	1,920
						<u>5,000</u>
				1 Jan. 19-5	Balance b/d	7,320
						<u>7,320</u>

Entries in Balance Sheet at 31st December 19-4

Current Liabilities		Fixed Assets	
Liability on Hire Purchase Agreement	£13,958	Excavators – at cost	40,000
		less Provision for depreciation	12,320
			£27,680

Note: The additional interest on disposal of excavator X represents compensation to the Vendors A.B. Ltd to cover additional administration costs, etc.:

Depreciation (Reducing Balance Method)	
Year 1	Cost
Less Deprn. 20%	15,000
	<u>3,000</u>
Yr. 2 Deprn. 20%	12,000
	<u>2,400</u>
Yr. 3 Deprn. 20%	9,600
	<u>1,920</u>
	<u>7,680</u>
	NBV
	NBV
	NBV
	Etc.

- 4.4 S.C. Ltd have a branch in Bristol. Goods are invoiced at selling price, being cost plus 25%. The branch keeps a sales ledger and remits all cash received to H.O. All expenses paid by H.O. Prepare a P and L a/c of the Bristol branch.

Stock 1 Jan. (Invoice Price)	1,250	Cash rec'd from Drs	3,300
Stock 31 Dec. " "	1,500	Goods invoiced from	
Drs. 1 Jan.	700	London	9,100
Drs. 31 Dec.	900	Rent	400
Cash Sales for year	5,400	Wages	340
Credit sales	3,500	Sundry expenses	80

- 4.5 The summarised balances of Summer Fashions Ltd trading in London on 1 January 19— were:

Fixed Assets	50,000
Stock	10,000
Debtors	8,000
Cash	12,000
Creditors	20,000

- (A) On 2 January two branches were opened, A and B, and £4,000 goods at cost were sent to each branch.
 (B) On 3 January London Head Office makes purchases of £16,000.
 (C) On 4 January £4,000 goods sent to each branch.
 (D) On 7 January the following information was returned to H.O.

	A	B
Remittances	11,500	9,000
Allowances made	200	300
Returns made	150	350

Head office sales £18,000; expenses paid £3,000, of which £1,000 related to A and £800 to B.

- (E) The value of assets transferred to each branch was recorded: (A) £20,000; (B) 15,000. The closing stocks were (A) £2,000; (B) £3,000; H.O. £1,000

The normal rate of gross profit is 50% on sales.

Record the above transactions, show the branch profits and prepare a statement to verify the valuation of stock.

- 4.6 S. Ltd opened an overseas branch in Kariba on 1 January. The following Trial Balance, in dollars, at 31 December has been received at Head Office:

	Branch	T.B.
Gross Profit		100,000
Selling Costs	40,000	
General office expenses	30,000	
Vehicle costs, 31 Mar.	15,000	
Office Equip. cost, 1 Jan.	10,000	
Stock	80,000	
Drs. and Crs.	70,000	50,000
c/f	<u>245,000</u>	<u>150,000</u>

b/f	245,000	150,000
H.O. Remittances 1 Jan.	100,000	
30 June	50,000	150,000
Cash at bank	55,000	
	<u>\$300,000</u>	<u>\$300,000</u>

Notes: (1) Depreciation is to be provided on cost of the fixed assets according to use at the rate of 5% on office equipment and 20% on vehicles. (2) Rates of exchange, for conversion, to sterling were:

1 Jan.	5
31 Mar.	6
30 June	5.5
30 Sept.	5.5
31 Dec.	5
Average	\$5.25

From the above information prepare the branch Trial Balance in sterling, incorporating depreciation, showing the rates of conversion.

- 4.7 A company with its head office in London operates an overseas branch. The branch books are kept in local currency, the florin. A.T.B. taken from the branch book at 31 December was:

Head Office a/c at 1 Jan.		152,636
Remittances	95,000	
Fixtures and Fittings	7,687	
Debtors	122,073	
Stock 1 Jan.	23,465	
Creditors		121,968
Purchases	168,350	
Sales		192,581
Expenses	10,510	
Cash	40,100	
	<u>f.467,185</u>	<u>f.467,185</u>

In the head office books the balance on the branch account at 1 January was £16,607 and the remittance account balance, 31 December was £9,661. There was no cash in transit.

The branch stock was valued at £31,000 on 31 December.

Rates of exchange were:

1 Jan.	f 9.50	
31 Dec.	f10.50	= £1
At purchase of F.A.	f10.25	

Prepare the Trial Balance given conversion rates and show the profit or loss made by the branch.

Show the journal entries in the H.O. books necessary to incorporate the results.

4.8 (a) On 1 September the totals of the sales and purchase ledger balances were:

	Dr.	Cr.
Sales Ledger	4,926	31
Purchase Ledger	17	3,040

During September the sales on credit were totalled at £3,567 and the credit purchases amounted to £2,784; returns were, sales £154 and purchases £67; bad debts of £83 were written off; a debtor for £36 was settled by contra with the purchase ledger credit balance for the same person. The analysis columns of the cash book for September contained the following totals:

Debit side – sales ledger £4,100, discounts £186
 Credit side – purchase ledger £2,872, discounts £75

At 30 September credit balances in the sales ledger totalled £17 and there were debit balances in the purchase ledger amounting to £24. You are required to prepare the sales ledger control account and the purchase ledger control account for September and bring down the balances to 1 October.

(b) After the control accounts in (a) above had been prepared it was found that:

- (i) goods sold to B. Brown had been correctly invoiced at £72 but wrongly recorded in the books as £27;
- (ii) the purchase of goods for £36 from C. Castle had been completely omitted from the records;
- (iii) The sales returns for the month had been undercast by £10 and discounts allowed had been overcast in the cash book by the same amount.

You are required to:

- (i) prepare the journal entries necessary to rectify the errors and omissions (narrations are not required);
- (ii) submit your calculation of the corrected totals of debtors in the sales ledger and creditors in the purchase ledger at 30 September.

4.9 The following figures were extracted from a trader's books:

Debit balance on sales ledger control a/c 1 Jan.	5,082
Sales, per sales journal in year	61,318
Discounts allowed per cash book	1,437
Receipts on account of credit sales	58,946

The book-keeper prepared a list of the sales ledger balances and these amounted to £5,502. The following errors were later discovered:

- (1) The sales journal had been overcast by £90.
- (2) The debit side of the personal a/c of a customer had been undercast by £209.
- (3) Discounts allowed £48 had been credited to the personal a/c's but no other entries had been made.

- (4) Goods £16 had been returned by a customer but no entry had been made anywhere in the books.
- (5) A sales invoice £132 entered in the sales journal had not been posted to the customer's a/c.
- (6) A debit balance of £36 on a customer's a/c had been omitted from the list of balances.

After the discovery of the above errors the book-keeper prepared a sales ledger control account and revised list of balances at 31 December. You are required to:

- (i) show the sales ledger control account;
- (ii) show your calculation of the total of the revised list of the sales ledger balances.

4.10 The following balances were extracted from the books as on 31 December:

Total of sales ledger balances	£12,716
Total of purchases ledger balances	8,270
Balances on sales ledger control account	12,865
Balances on purchases ledger control account	8,301

The balances on the control accounts mentioned above were included in the Trial Balance extracted as on 31 December. In this Trial Balance, the total of the debit balances exceeded the total of the credit balances by £359.

The following errors were afterwards discovered:

- (1) The sales journal for the month of December was correctly totalled as £6,412 but this was incorrectly posted to the credit of the sales account as £6,142.
- (2) Discount of £35 allowed by a supplier had been entered on the wrong side of his personal account in the purchase ledger.
- (3) The purchases journal for the month of December had been overcast by £190.
- (4) A debit balance of £71 on the personal account of a customer had been omitted from the list of sales ledger balances.
- (5) During December it was decided that a debt of £78 owing by a customer should be written off as bad. The correct entry was made in the debtor's personal account in the sales ledger, but no other entries had been made in the books.

After the above errors had been discovered, an undetected error remained in the company's books. You are required to:

- (i) prepare a statement showing the revised totals of the sales and purchases ledger balances and the revised balance on each of the control accounts, on the assumption that the errors mentioned above had been corrected;
- (ii) calculate the amount of the undetected error and give your opinion of its location in the books.

CHAPTER 5

Incomplete Records

Before studying the problem of incomplete records it is essential to remember the elementary accounting principles, which are as follows:

- (1) That every transaction is recorded in some suitable form, i.e. by means of journal entry, proof sheet, original document, in order that the item can be entered in the relevant account.
- (2) That every transaction involves a dual movement of the business funds (a double entry has been made, i.e. each debit has a corresponding credit).
- (3) That the control of debtors and creditors is maintained by the use of summary accounts.

Many traders, however, think it unnecessary to maintain accounts in order to ascertain the results of their operations, either because they lack understanding of the book-keeping system or because they think the size of the business does not warrant a full set of books.

The results of a period's trading will, however, be required by the Inland Revenue for taxation purposes and an accountant may then be approached with a request to complete a set of trading accounts from the few records kept by the trader. These records may be nothing more than copies of unpaid invoices relating to suppliers and customers, all other invoices having been destroyed at the time of payment as the trader saw no need to retain paid invoices.

The trader should, however, have a copy of his Balance Sheet at the end of the previous financial period, giving details of the assets and liabilities of the business. He will also be able to provide an estimate of his position at the end of the financial period. From this information it will be possible to calculate approximately his profit or loss for the period, because profits earned are reflected in an increase in the proprietor's interest. This point can be illustrated by the following example.

A trader commenced business on 1 January with a capital of £29,000. He says that at 31 December his position was: Premises, £20,000; Shop Fittings, £6,000; Stock, £3,000; Debtors, £5,000; Bank £3,700 and Creditors, £4,600. A Balance Sheet at 31 December would show:

Premises	20,000
Fittings	6,000
Stock	3,000
Debtors	5,000
Bank	3,700
	37,700
Less	
Creditors	4,600
∴ Proprietor's	
Interest	£33,100

The increase in proprietor's interest must be represented by profit in the absence of other information, e.g.:

Proprietor's Interest 1 January	29,000
Proprietor's Interest 31 December	33,100
Increase due to Profits earned in period	£4,100

This method of arriving at a profit, however, may be inconclusive or incorrect because the trader may have concealed various factors in the belief that they are not essential to the calculation of profit. At the same time, even if all information is provided certain movements will take place in a business which will not produce a profit or loss; these will include: (1) introduction and withdrawal of Assets by Proprietor; (2) purchase of Assets from funds other than those already in the business; (3) loss in value of Assets through depreciation or obsolescence; (4) sale of Assets at a figure other than their book value.

These points can best be illustrated by an example:

	1 Jan.	31 Dec.
Premises	25,000	35,000
Fittings	12,000	10,000
Stock	8,000	6,500
Debtors	9,000	10,500
Bank	3,000	4,900
	57,000	66,900
Less Creditors	7,500	8,700
Proprietor's Interest	£49,500	£58,200

The trader says that he has withdrawn £50 per week from takings and taken £300 of goods during the year. During the year he sold some private investments and used the proceeds, £10,000, to purchase additional premises. He had also allowed £2,000 as depreciation on Fittings.

In calculating profit the following must be borne in mind: (1) if cash had not been withheld the bank balance would be £2,600 (£50 x 52 weeks) greater than shown; (2) if stock of £300 had not been taken by proprietor the Balance Sheet

at 31 December would show stock as £6,800; (3) the purchase of premises would not have been possible without introduction of additional funds.

If the proprietor had not carried out the transactions mentioned above the Balance Sheet as at 31 December would have appeared as follows:

Premises (£35,000 – £10,000)	25,000
Fittings	10,000
Stock (£6,500 + £300)	6,800
Debtors	10,500
Bank (£4,900 + £2,600)	7,500
	<u>59,800</u>
Less Creditors	8,700
Proprietor's Interest	<u><u>£51,100</u></u>

Profit would be calculated as follows:

Proprietor's Interest at 1 January	49,500
Proprietor's Interest at 31 December	51,100
Apparent Profit after Depreciation	<u>£1,600</u>

This profit can be proved in the following manner:

Proprietor's Interest 1 January	49,500
Proprietor's Interest 31 December (as per original summary)	58,200
Apparent Profit	<u>8,700</u>
Add Assets Withdrawn:	
Stocks	300
Cash	<u>2,600</u>
	<u>2,900</u>
Deduct Funds Introduced:	10,000
∴ Actual Profit	<u><u>£1,600</u></u>

The trader's Balance Sheet at 31 December can now be drawn up as follows:

Premises at 1 January	25,000	
Additions in Period	<u>10,000</u>	
		35,000
Fittings at 1 January	12,000	
Less Depreciation	<u>2,000</u>	
		10,000
Stock	6,500	
Debtors	10,500	
Bank	<u>4,900</u>	
		<u>21,900</u>
		66,900
Less Creditors		8,700
Net Assets		<u><u>£58,200</u></u>

Proprietor's Interest 1 January	49,500
Add Capital Introduced	10,000
Profits Earned in Period	1,600
	<u>61,100</u>
Less Drawings	2,900
	<u><u>£58,200</u></u>

Note: The total of the above Balance Sheet corresponds to the original position provided by the trader, but we can now see in greater detail the state of the business and the movements of the proprietor's interest.

The following example should be studied:

	<i>1 Jan.</i>	<i>31 Dec.</i>
Premises	10,000	15,000
Fittings	5,000	7,000
Vehicles	4,000	3,000
Stock	7,000	8,000
Debtors	9,000	10,000
Bank	3,000	4,000
	<u>38,000</u>	<u>47,000</u>
Less Creditors	18,000	22,000
Proprietor's Interest	<u><u>£20,000</u></u>	<u><u>£25,000</u></u>

The trader supplied the following information:

He had surrendered a private insurance policy and used the proceeds to purchase additional premises.

Fittings at a cost of £3,000 had been purchased from business funds. £1,000 of the total of all fittings was to be charged for depreciation.

The reduction in the value of vehicles was represented by depreciation.

The trader has used £500 of stock for his private consumption and had also withdrawn £3,000 in cash during the year.

His position at 31 December would be calculated as follows:

Interest at 1 January		20,000
Interest at 31 December		<u>25,000</u>
Apparent Profit		5,000
Add Assets Withdrawn		
Stock	500	
Cash	<u>3,000</u>	<u>3,500</u>
		8,500
Less Funds Introduced		5,000
Actual Profits		<u><u>£3,500</u></u>

It will be seen, if reference is made to the previous example, that there is no need to show depreciation in the above calculation.

The trader's Balance Sheet at 31 December would be shown as:

Premises at 1 January	10,000	
Additions	<u>5,000</u>	
		15,000
Fittings at 1 January	5,000	
Additions	<u>3,000</u>	
	8,000	
Less Depreciation	<u>1,000</u>	
		7,000
Vehicles at 1 January	4,000	
Less Depreciation	<u>1,000</u>	
		<u>3,000</u>
		25,000
Stocks	8,000	
Debtors	10,000	
Bank	<u>4,000</u>	
		<u>22,000</u>
		47,000
Less Creditors		<u>22,000</u>
Net Assets		<u>£25,000</u>
Proprietor's Interest at 1 January		20,000
Capital Introduced		5,000
Profit		<u>3,500</u>
		28,500
Deduct Funds withdrawn		<u>3,500</u>
Proprietor's Interest at 31 December		<u>£25,000</u>

The addition to Fittings, £3,000, has come from business funds and is merely an internal movement of assets.

Existence of Partial Records

The trader may have maintained a record of his receipts and payments – a summary of amounts paid into his bank accounts and counterfoils of cheques drawn. From these it is possible to prepare a Cash Account showing the trader's funds at the bank and his Cash in Hand.

The Trader's bank statements supplied by his bank must also be examined to discover receipts and payments recorded by the bank and not entered by the trader in his cash book, e.g. the receipt of monies direct from customers (Trader's Credits) and the payment of Standing Orders and Bank Charges.

Care must be taken during this operation to distinguish between business and personal transactions. The latter affect the proprietor's interest only and are not business income or expenses.

Although the trader has maintained a cash book, or had one prepared for him, no ledger accounts will have been written up and the single entry in the bank book must be converted to double entry by means of summary accounts.

Since personal accounts contain the basic facts shown below, the provision of a combination of any of them will enable the account to be completed.

Debtors Account

Opening balance b/d	X	Cash Received	X
Sales in period	X	Closing Balance c/d	X
Balance b/d	—		—

Creditors Account

Cash Paid	X	Opening Balance b/d	X
Closing Balance c/d	X	Purchases in period	X
	—	Balance b/d	—

Thus if a trader provides the information that debtors at commencement of a financial period were £10,000, that he had received £35,000 in cash and that £12,000 was due at the end of the year, the value of sales could be calculated as follows:

Debtors Account

Opening balance b/d	10,000	Cash Received	35,000
∴ Sales (calculated as)	37,000	Closing Balance c/d	12,000
	<u>£47,000</u>		<u>£47,000</u>
Balance b/d	12,000		

Similarly the value of purchases can be calculated, given that £7,500 was owed to creditors at commencement of the year, that £28,000 had been paid to them and that they were owed £9,800 at end of year. Preparation of a creditors control would proceed as follows:

Creditors Account

Cash Paid	28,000	Opening Balance b/d	7,500
Closing Balance c/d	9,800	∴ Purchases (calculated as)	30,300
	<u>£37,800</u>		<u>£37,800</u>
		Closing Balance b/d	9,800

Where the trader provides additional information, such as bad debts incurred, discounts allowed or received or cheques dishonoured, these appear as part of the double-entry system in the summary account. Given the information shown below in respect of debtors, sales would be calculated as indicated in the Debtors Account:

Opening Balance	36,000
Cash Received	182,000
Cheques Dishonoured	530
Bad Debts Written off	1,870
Discounts Allowed	3,700
Closing Balance	42,500

Debtors Account

Opening Balance	36,000	Cash Received	182,000
Cheques Dishonoured	<u>530</u>	Discounts – P and L a/c	3,700
	36,530	Bad Debts – P and L a/c	1,870
∴ Sales	<u>193,540</u>	Closing Balance c/d	<u>42,500</u>
	<u>£230,070</u>		<u>£230,070</u>
Closing Balance b/d	42,500		

The principles involved in preparing a set of accounts in accordance with the points demonstrated above can be followed by working through the following example.

A trader produces a summary of his bank book together with details of assets and liabilities at commencement and end of period:

Bank Book Summary, Year Ending 31 December

Opening Balance	1,125	Payments to Creditors for Goods	33,000
Cash Sales	45,000	Cash Purchases	2,850
Receipts from Debtors	1,800	Rent	2,100
Closing Balance c/d	455	General Expenses	6,290
		Cash Withdrawn by Proprietor	4,140
	<u>£48,380</u>		<u>£48,380</u>
Other Balances	<i>1 Jan.</i>		<i>31 Dec.</i>
Shop Fittings	1,500		1,200
Stock	4,740		5,130
Debtors	1,925		2,525
Rent Paid in Advance	–		300
Rent in Arrears	450		–
General Expenses in Arrears	420		600
Creditors – Trade	3,750		3,375

The trader says that prior to banking the takings he had paid wages £2,280 and had taken £400 for his own use. He had also taken goods £750 for his personal use. In addition he had allowed discounts of £785 and had written off Bad Debts of £150. Creditors had allowed him discounts of £450. The trader asks for a statement of profit for the year.

We can answer this problem in two ways – by the preparation of a closing Balance Sheet and the preparation of a Trading and Profit and Loss Account.

(1) Calculation of Proprietor's Interests:

<i>Assets</i>	<i>1 Jan.</i>	<i>31 Dec.</i>
Fittings	1,500	1,200
Stock	4,740	5,130
Debtors	1,925	2,525
Bank	1,125	—
Rent in Advance	<u>—</u>	<u>300</u>
	9,290	9,155
 <i>Liabilities</i>		
Creditors	3,750	3,375
Expenses Outstanding	420	600
Rent Outstanding	450	—
Bank Overdraft	<u>—</u>	<u>455</u>
	4,620	4,430
 ∴ Proprietor's Interest	 <u>£4,670</u>	 <u>£4,725</u>
 Apparent profit represented by the increase		
	55	
To which must be added: Drawings		
Cash (4,140 + 400)	4,540	
Goods	750	
Actual Profit	<u>£5,345</u>	

(2) Calculation of the profit by Trading and Profit and Loss Account involves the following calculations:

Purchases on Credit

<i>Creditors Account</i>			
Cash Paid	33,000	Opening Balance b/d	3,750
Discounts (P and L a/c)	450	∴ Purchases	33,075
Closing Balance c/d	3,375	(Cost of Sales a/c)	
<u>£36,825</u>		<u>£36,825</u>	

Cost of Sales Account

Opening Stock b/d	4,740	Goods used by Prop.	750
Credit Purchases	33,075	Closing Stock c/d	5,130
Cash Purchases per CB	2,850	\therefore <i>Cost of Goods Sold</i>	34,785
		(Trading a/c)	
	<u>£40,665</u>		<u>£40,665</u>

Proprietor's Drawings Account

Goods	750	Transfer to Cap. a/c	5,290
Cash	4,140		
Cash Prior to Bankings (Sales a/c)	400		
	<u>£5,290</u>		<u>£5,290</u>

Debtors Accounts

Opening Balance b/d	1,925	Cash Received	1,800
\therefore <i>Credit Sales</i>	3,335	Discounts (P and L a/c)	785
		Bad Debts (P and L a/c)	150
		Closing Balance c/d	2,525
	<u>£5,260</u>		<u>£5,260</u>
Balance b/d	2,525		

Sales Account

Trading a/c	51,015	Credit Sales	3,335
		Cash Sales Banked	45,000
		Cash Sales Withheld by Prop. (Capital a/c)	400
		Cash Sales Used to Pay Wages (P and L a/c)	2,280
	<u>£51,015</u>		<u>£51,015</u>

Rent Account

Cash Paid	2,100	Balance b/d	450
		(Arrears)	
		Balance c/d (Prepaymt.)	300
		\therefore <i>Profit and Loss a/c</i> <i>Charge</i>	1,350
	<u>£2,100</u>		<u>£2,100</u>
Balance b/d	300		

Expense Account

Cash Paid	6,290	Balance b/d (Accrual)	420
Balance c/f (Arrears)	600	∴ Charge for Year (P and L a/c)	6,470
	<u>£6,890</u>		<u>£6,890</u>
		Balance b/d	600

Wages Account

Cash Paid	<u>£2,280</u>	Profit and Loss a/c Charge	<u>£2,280</u>
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*Trading and Profit and Loss Account
for the Year Ending 31 December*

Cost of Goods sold	34,785	Sales	51,015
Gross Profit	16,230		
	<u>£51,015</u>		<u>£51,015</u>
Wages	2,280	Gross Profit	16,230
Rent	1,350		
General Expenses	6,470		
Discounts (785 – 450)	335		
Bad Debts	150		
Depreciation – Fittings (1,500 – 1,200)	300		
	10,885		
Net Profit	5,345		
	<u>£16,230</u>		<u>£16,230</u>

Balance Sheet as at 31 December

Fittings			1,500
Less Depreciation			<u>300</u>
			1,200
Stock	5,130		
Debtors	2,525		
Rent Paid in Advance	<u>300</u>		
		7,955	
Less Creditors	3,375		
Accrued Charges	600		
Bank Overdraft	<u>455</u>		
		<u>4,430</u>	
			<u>3,525</u>
			<u>£4,725</u>
Proprietor's Interest 1 Jan.			4,670
Add Profit Earned			<u>5,345</u>
			10,015
Less Drawings			<u>5,290</u>
Proprietor's Interest 31 Dec.			<u>£4,725</u>

As with the summary of Debtors and Creditors, a Trading Account can be prepared to ascertain an unknown figure, i.e. Sales, Closing Stock, Gross Profit, Cost of Sales.

The following shows the layout of a Trading Account:

<i>Trading Account</i>			
Opening Stock b/d	X	Sales	X
Add Purchases	<u>X</u>		
	X		
Less Closing Stock c/f	<u>X</u>		
Cost of Goods Sold	X		
Gross Profit c/d	<u>X</u>		
	<u>X</u>		<u>X</u>

Sometimes it may be impossible to calculate sales because of the lack of information, e.g. records destroyed by fire. The Gross Profit margin expressed as a percentage will, however, be known, and from this information the Trading Account can be constructed as follows:

Assume no opening or closing stock

Purchases are £50,000.

Gross Profit is 25% on cost; this is £12,500.

Therefore Sales are £62,500.

<i>Trading Account</i>			
Purchases	50,000	Sales	62,500
Gross Profit @ 25% of cost	12,500		
	£62,500		£62,500

Assume:	Purchases	90,000	
	Closing Stock	10,000	
	Cost of Goods Sold		
	Sold	80,000	
	If G.P. is 20% of cost, this is	16,000	
	∴ Sales are	96,000	

<i>Trading Account</i>			
Purchases	90,000	Sales	96,000
Less Closing Stock	10,000		
Cost of Goods Sold	80,000		
Gross Profit @ 20% on Cost	16,000		
	£96,000		£96,000

Similarly, where the Sales figure is known but complete details of costs are not known (e.g. loss of stock as the result of a fire) the value of closing stock can be computed as follows:

Given that Opening Stock	12,000
Purchases	90,000
Sales	120,000
Gross Profit 25% of sales	

Calculate Closing Stock

Sales	120,000
Gross Profit	30,000
∴ Cost of Goods Sold	90,000
Purchases + Opening Stock	102,000
∴ Closing Stock	£12,000

<i>Trading Account</i>			
Opening Stock	12,000	Sales	120,000
Purchases	90,000		
	102,000		
Closing Stock	12,000		
Cost of Goods Sold	90,000		
Gross Profit	30,000		
	£120,000		£120,000

Incomplete Records for Non-Trading Organisations

There are also non-trading organisations who do not maintain full accounting records because there is no legal requirement for them to do so.

Such organisations, for example sporting clubs, horticultural societies, consumer protection associations, friendly societies, professional societies, would appoint a treasurer who would be expected to report, at least annually, the organisation's revenue and expenses.

Non-trading or voluntary societies will not obtain their initial funds in the form of capital, because the absence of initial formation expenses and capital equipment makes it unnecessary. When individuals decide to form a society they fix an annual subscription charge payable in advance by members and expenditure must be kept within this total income. To that extent a certain amount of budgeting is essential by voluntary organisations, added to which will be the necessity to find alternative methods of raising funds where it is obvious that expenditure will exceed income in a particular period. Such additional funds might consist of:

- (1) Joining or entrance fees – a lump sum payable on admission in addition to first year's subscription. Such fees may be taken as Income in the period in which received or apportioned over a specified number of periods.
- (2) Proceeds of raffles, competition tickets, dances, etc. The committee should ensure that revenue exceeds cost of prizes.
- (3) Donations from supporters, other than members.
- (4) Profits from trading sections, e.g. restaurants and magazines.

The expenditure on the various activities and the day-to-day running of the society together with details of revenue, are recorded by the treasurer in the bank book, the record probably being maintained in an analytical manner to assist the treasurer in the preparation of a financial statement for the members at the end of the financial period. This summary of revenue and expenditure is referred to as a Receipts and Payments Account.

If it is assumed that a society is formed for the purpose of improving the safety of motor vehicles and during the first year recruits 10,000 members, each paying a £1 annual subscription, and the society makes revenue payments totalling £7,800, the difference between receipts and payments of £2,200 represents an excess of income over expenditure and would be placed in an

Accumulated Fund, the name given to an account corresponding to the proprietor's interest of a trading concern.

The accumulated fund represents the accumulation of excesses of Income over Expenditure of the society during its existence and at the same time represents the difference between the Assets and Liabilities of the society at any time.

It is important, however, that as with trading organisations a distinction is drawn between expenditure of a revenue nature and that of a capital nature. Assuming that the Society for Vehicle Safety incurred a cost of £2,000 in addition to the £7,800 indicated above on Vehicle Testing Equipment the Receipts and Payment Account would appear as follows:

<i>Receipts and Payments</i>			
Subscriptions	10,000	Printing and Stationery	2,500
		Telephone	1,000
		Rent of Premises	1,500
		Lecture Fees	1,800
		Secretary's Fees	1,000
		Equipment	2,000
		Balance c/d	200
	£10,000		£10,000

Whilst this account shows the members the state of their bank account it does not show them that subscriptions covered revenue expenditure, or the net assets of their society.

An Income and Expenditure Account (corresponding to the Profit and Loss Account of a trading concern) and a Balance Sheet are necessary for this.

*Income and Expenditure Account of the Society for Vehicle Safety
for the year ending 31 December*

<i>Expenditure</i>		<i>Income</i>	
Printing	2,500	Subscriptions	10,000
Telephone	1,000		
Rent	1,500		
Fees	1,800		
Secretary	1,000		
	7,800		
Excess of Income over Expenditure	2,200		
	£10,000		£10,000

*Balance Sheet of the Society for Vehicle
Safety as at 31 December*

Assets	
Testing Equipment	2,000
Bank	200
	£2,200
Accumulated Fund	£2,200

Note that the Accumulated Fund equals assets – if these are realised at their Balance Sheet values the proceeds will revert to the members.

Subscriptions in Arrears or in Advance

Like trading concerns, non-trading organisations are entitled to include as revenue any items due, or charged, to members in a particular year. At the same time they should exclude any revenue received relating to a subsequent year.

If it is assumed that during its second year the society, which has now increased to 12,000 members, has received £12,800 in subscriptions it would be correct to assume that 800 members had paid the following year's subscriptions. These would be carried forward to the Balance Sheet as liabilities, and the Income and Expenditure Account credited with £12,000. If, however, the treasurer informs the society that 1,000 members have paid in advance, the position would be as follows:

<i>Subscription Account</i>			
Payments in Advance c/f	1,000	Cash Received	12,800
Income and Expenditure a/c	12,000	∴ Subscriptions in Arrears c/f	200
	£13,000		£13,000
Arrears b/d	200	Prepayments b/d	1,000

The arrears are debtors to the society, i.e. members who owe for the services they have received; the prepayments are creditors, i.e. members who have not received any service for their subscriptions and would be entitled to a refund if their membership was cancelled or the society closed down.

Some organisations will not take subscriptions in arrears into account in the period to which they refer. They consider it better to adopt a conservative policy and only take the arrears into account in the financial period in which they are actually received.

Non-Trading Organisations Undertaking Trading Activities

Some voluntary organisations provide facilities for their members in the form of a restaurant, bar or magazine sales which it is hoped will result in a profit mainly to ensure that subscriptions are kept to a minimum.

The cost of running such activities will be set against the revenue earned from sales, the profit being shown by way of a Trading Account and subsequently shown as revenue in the Income and Expenditure Account.

Assuming that the society treasurer produced the following Receipts and Payments at the end of the second year and that the Subscription Account is as shown above, the accounts would be presented as:

Receipts and Payments, Year Ending 31 December – Year 2

Balance b/d	200	Printing	3,000
Subscriptions	12,800	Telephone	1,200
Bar Sales	3,500	Rent	1,500
		Lecture Fees	1,800
		Secretary's Fee	1,000
		Equipment	500
		Cost of Bar Supplies	2,625
		Balance c/d	4,875
	<u>£16,500</u>		<u>£16,500</u>

The treasurer has recommended that £700 be written off the value of equipment.

*Bar Trading Account
for the Period Ending 31 December*

Cost of Supplies	2,625	Sales	3,500
Profit	875		
	<u>£3,500</u>		<u>£3,500</u>

*Income and Expenditure Account
for the Period Ending 31 December*

Printing	3,000	Subscriptions	12,000
Telephone	1,200	Profit on Bar	875
Rent	1,500		
Lectures	1,800		
Secretary	1,000		
Depn. of Equipment	700		
	<u>9,200</u>		
Excess of Income over Expenditure	3,675		
	<u>£12,875</u>		<u>£12,875</u>

Balance Sheet as at 31 December

Assets

Testing Equipment at Cost	2,500	
Less Depreciation	700	
		1,800
Subscriptions in Arrears	200	
Bank	4,875	
	5,075	
Less Subscriptions in Advance	1,000	
		4,075
		£5,875
Accumulated Fund 1 Jan.		2,200
Add Excess of Income over Expenditure for the year		3,675
Balance 31 Dec.		£5,875

The above example assumes there was no closing stock. Where the organisation is carrying stock at the end of a financial year this will be dealt with in exactly the same manner as for a trading organisation, i.e. deduct the value of closing stock from purchases and show it as an asset on the Balance Sheet.

Income of a Special Nature, e.g. Prize Funds

Most professional bodies and, in some circumstances, research societies, award annual prizes for outstanding work by members. Such prizes will be awarded from the proceeds of the investment of funds which will probably have been donated by members on the understanding that the capital sum will be invested and the interest earned used only to donate prizes of a specific value.

Any unused revenue on the Prize Fund would be carried forward on the Balance Sheet for use in subsequent years. The accounting entries would be:

Receipt of Legacy	Dr. Bank Cr. Endowment
Purchase of Investment	Dr. Investment Cr. Bank
Receipt of Interest on Investment	Dr. Bank Cr. Prize Fund
Payment of Prize Money	Dr. Prize Fund Cr. Bank

Assume that a member, H.J. Smith, leaves a legacy to his association on condition that it is invested at 8% and the interest then used for the awarding of prizes. The prizes cost £650. The accounting entries would be as follows:

Bank Account

1 Jan. Receipt of Legacy (H.J. Smith)	10,000	1 Jan. Purchase of Investmts.	10,000
31 Dec. Investment Income	800	31 Dec. Prizes, cost of Balance c/d	650 150
	<u>£10,800</u>		<u>£10,800</u>

H.J. Smith Endowment a/c

	Cash	10,000
--	------	--------

H.J. Smith Prize Fund

Cost of Prizes for year	650	Interst for year	800
Balance c/d	150		
	<u>£800</u>		<u>£800</u>
		Balance b/d	150

8% Bond a/c

Investment	10,000	
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The balances on both the Legacy Account and the 8% Bonds Account will appear on the Balance Sheet.

Assuming that a member of the Vehicle Safety Society, Jones, died and left £5,000 in his will in order to provide an award for the best safety device of the year, the Receipts and Payments Account for the third year of the society would be as follows:

*Receipts and Payment
for the Year Ending 31 December – Year 3*

Balance b/f	4,875	Printing	5,000
Subscriptions	14,000	Rent	1,500
Bar Sales	4,500	Lecture Fees	2,200
Legacy	5,000	Secretary	1,500
Investment Interest	400	Equipment	300
		Telephone	1,600
		Cost of Bar Supplies	3,875
		Purchase of Investments	5,000
		Annual Safety Award	375
		Balance c/f	7,425
	<u>£28,775</u>		<u>£28,775</u>

120 *A Foundation in Business Accounting*

The treasurer informs you that: (1) the society has 13,700 members and that 400 members are in arrears; (2) bar stocks are valued at £500; (3) £700 is to be written off equipment.

<i>Subs a/c</i>																					
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Balance b/d</td> <td style="width: 50%; text-align: right;">200</td> </tr> <tr> <td>Income – Expenditure a/c</td> <td style="text-align: right;">13,700</td> </tr> <tr> <td>∴ Prepayments c/f</td> <td style="text-align: right;">1,500</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">£15,400</td> </tr> <tr> <td>Balance b/d</td> <td style="text-align: right;">400</td> </tr> </table>	Balance b/d	200	Income – Expenditure a/c	13,700	∴ Prepayments c/f	1,500		£15,400	Balance b/d	400	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Balance b/d</td> <td style="width: 50%; text-align: right;">1,000</td> </tr> <tr> <td>Cash</td> <td style="text-align: right;">14,000</td> </tr> <tr> <td>Arrears c/f</td> <td style="text-align: right;">400</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">£15,400</td> </tr> <tr> <td>Balance b/d</td> <td style="text-align: right;">1,500</td> </tr> </table>	Balance b/d	1,000	Cash	14,000	Arrears c/f	400		£15,400	Balance b/d	1,500
Balance b/d	200																				
Income – Expenditure a/c	13,700																				
∴ Prepayments c/f	1,500																				
	£15,400																				
Balance b/d	400																				
Balance b/d	1,000																				
Cash	14,000																				
Arrears c/f	400																				
	£15,400																				
Balance b/d	1,500																				

<i>Prize Fund</i>													
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Awards</td> <td style="width: 50%; text-align: right;">375</td> </tr> <tr> <td>Balance c/d</td> <td style="text-align: right;">25</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">£400</td> </tr> </table>	Awards	375	Balance c/d	25		£400	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Interest</td> <td style="width: 50%; text-align: right;">400</td> </tr> <tr> <td>Balance b/d</td> <td style="text-align: right;">25</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">£400</td> </tr> </table>	Interest	400	Balance b/d	25		£400
Awards	375												
Balance c/d	25												
	£400												
Interest	400												
Balance b/d	25												
	£400												

*Bar Trading Account
for the Year Ending 31 December*

Purchases of Bar Supplies	3,875	Bar Sales	4,500
Less Stock	500		
	3,375		
Profit	1,125		
	£4,500		£4,500

*Income and Expenditure Account
for the Year Ending 31 December*

Printing	5,000	Subscriptions	13,700
Rent	1,500	Bar Profit	1,125
Lectures	2,200		
Secretary	1,500		
Telephone	1,600		
Depreciation	700		
	12,500		
Excess of Income over Expenditure	2,325		
	£14,825		£14,825

*Balance Sheet
as at 31 December*

Equipment at Cost	2,800	
Less Depreciation	<u>1,400</u>	
		1,400
Investments F. Jones' Legacy	5,000	
Stocks	500	
Subs in Arrears	400	
Bank	<u>7,425</u>	
	13,325	
Subs in Advance	1,500	
Prize Fund	25	
Legacy F. Jones	<u>5,000</u>	
	6,525	<u>6,800</u>
		<u>£8,200</u>
Accumulated Fund b/f 1 Jan.	5,875	
Add Excess of Income over Expenditure for Year	<u>2,325</u>	
Balance 31 Dec.		<u>8,200</u>

The accumulated fund still represents the excess of the assets over the liabilities.

In examination questions candidates will often be required to calculate the accumulated fund at the commencement of a year. It is important to remember that the procedure is exactly the same as for ascertaining the interest of a sole trader:

Sole Trader

$$\begin{aligned} & \text{Assets} - \text{Liabilities} \\ & = \text{Proprietor's Interest} \end{aligned}$$

Non-Trading Concerns

$$\begin{aligned} & \text{Assets} - \text{Liabilities} \\ & = \text{Accumulated Fund} \end{aligned}$$

In a similar manner to sole traders the information concerning Purchases and Sales may be presented in a manner that will necessitate the preparation of summary accounts to ascertain the cost of goods purchased and sales revenue.

Questions

5.1 A trader commenced business on 1 January with capital of £5,000. During the next twelve months he kept no books of account but at 31 December he informed his accountant that the business has the following assets and liabilities: Shop Fittings £4,750; Stock £3,500; Van £2,300; Debtors £3,200; Cash in Hand £225; Bank Overdraft £370; Creditors £2,850.

Calculate for the trader: (a) his capital at end of year; (b) his profit for the year.

5.2 A trader produced the following lists of assets and liabilities at 1 January and 31 December and informed his accountant that during the year he had paid into the business £4,500, the proceeds from the sale of private investments, and that he had withdrawn £3,700 of the profits earned in the year.

	<i>1 Jan.</i>	<i>31 Dec.</i>
Fittings	3,500	3,300
Vehicles	1,280	1,100
Stock	2,650	3,750
Debtors	750	900
Prepaid Expenses	120	150
Accrued Expenses	70	90
Creditors	1,950	1,170
Overdrafts	180	540

Prepare statements showing capital at 1 January and 31 December and indicate the profit earned in the year.

5.3 From the information provided below you are required to prepare a Trading and Profit and Loss Account for the year and a Balance Sheet as at 31 December.

<i>Summary of Bank Book</i>			
<i>Receipts</i>		<i>Payments</i>	
Balance b/f	2,450	Creditors	50,210
Cash Sales	60,130	Wages	3,780
Credit Sales	1,120	General Expenses	4,360
Rent received	250	Dishonoured Cheques	15
		Fittings – Shop	1,500
		Drawings	945
		Balance c/d	3,140
	<u>£63,950</u>		<u>£63,950</u>

Additional information provided: (a) discounts allowed £250; (b) bad debts written off £75; (c) goods taken by proprietor £480.

Assets and Liabilities are:

	<i>1 Jan.</i>	<i>31 Dec.</i>
Shop Fittings	8,500	9,300
Stock	4,600	4,950
Debtors	90	125
Petty Cash in Hand	50	35
Creditors	3,750	4,290
Wages Accrued	480	570

5.4 From the following information calculate the accumulated fund of the Accounting Society as at 1 January:

Bank Balance £4,500; Amounts due to Suppliers £750; Subscriptions in Arrears £380; Equipment as Valued £7,900; Investments £18,000; Subscriptions in Advance £250; Rent Accrued £690; Salaries due £1,470; Legacy £18,000; Prize Fund £120.

5.5 From the following Receipts and Payments Account, together with the additional information provided, prepare an Income and Expenditure Account for the year and a Balance Sheet as at the end of the year.

Receipts and Payments a/c

Balance b/f	350	Payments to Suppliers	290
Subscriptions	5,000	Printing	1,200
Donations	30	Investments	3,000
Bar Sales	380	Telephone	540
Legacy	3,000	Postage	380
Investment Income	240	Equipment	590
		Annual Awards	210
		Balance c/f	2,790
	<u>£9,000</u>		<u>£9,000</u>

The treasurer informs you that the society has 480 members each paying a £10 annual subscription:

	<i>1 Jan.</i>	<i>31 Dec.</i>
Creditors	70	85
Stocks	120	150
Subs in Arrears	90	20
Subs in Advance	40	?
Equipment	2,500	2,490
Prize Fund	—	?

CHAPTER 6

The Partnership

One form of organisational structure of a business is the partnership which occurs where two or more people carry on a business in common with the intention of earning profits. No particular formality is necessary to create a partnership but it is usual for an agreement, either verbal or written, to be made. Even if there is no agreement, where two people act as if they were in partnership they incur legal recognition as if a partnership existed and enjoy the benefits and incur the liabilities which that entails. Following are some of the reasons for the formation of a partnership:

(1) *Pooling of resources.* A sole proprietor, having exhausted all his available sources of finance, will be unable to expand his business. The pooling of his own resources with one or more other individuals will provide the finance with which to expand.

(2) *Complimentary expertise.* Where the business requires expert knowledge it may be convenient for one partner to specialise in a particular area. For example, a partner in an accountancy practice may specialise in liquidations while another specialises in taxation.

(3) *Economic advantages.* Where there are several individuals carrying on similar work there may be economic advantages of scale, such as the reduction in administration or overhead costs.

(4) *Provision of a service.* Where the business is one in which it is essential to provide a continuous service it may be convenient to form a partnership which can evenly spread the workload, e.g. a medical or veterinary practice.

Different Kinds of Partner

There are four different kinds of partner: (1) acting partner, who takes part in the management of the business; (2) sleeping partner, who has capital in the business but does not engage in its management; (3) limited partner, who has had his liability restricted to the amount of capital invested or to a known fixed sum – this is in accordance with the Limited Partnership Act 1907 but it should be noted that there must be at least one unlimited partner; (4) quasi-partner, who has retired from active participation but has left his capital in the firm as a loan, the interest on which varies with the profits, and who allows himself to be held out as a partner (but is not in fact) thus incurring partnership liabilities.

The Partnership Agreement

Every partnership should be governed by an agreement which will cover the following:

- (1) *Capital.* The amount each should contribute (which need not be equal) and if it is to be a fixed amount.
- (2) *Division of profits.* The manner in which profits and losses are to be divided.
- (3) *Interest.* Whether capital should earn interest, the rate and method of calculation.
- (4) *Current accounts.* Whether these should be maintained, carry interest, the rate and method of calculation and the maximum amount which may be drawn by each partner.
- (5) *Commission and salaries.* Whether any partner is to be allowed a commission or salary before the division of profits and stating the amount or method of calculation of such commission or salary.
- (6) *Accounts.* That audited sets of accounts be prepared and are binding on all partners.
- (7) *Goodwill.* The method of valuation, when it should be valued and whether it is to appear in the books of account.
- (8) *Alteration.* The notice required to be given by a retiring-partner, the manner in which his capital is to be repaid. How such capital is calculated.
- (9) *Death.* On the death of a partner the method of calculation of his interest in the profits, the method of repayment and interest rate on the unpaid balance.

The Partnership Act 1890

Where there is no partnership agreement or where such an agreement is silent the Partnership Act 1890 will apply. The main accounting provisions of the Act are as follows:

- (1) All partners are entitled to share equally in the capital and profits and contribute equally towards losses.
- (2) Where a partner makes a loan or advance beyond the required capital he will be entitled to interest on such an amount at 5% per annum.
- (3) A partner is not entitled to interest on capital.
- (4) No partner is entitled to remuneration for acting in the business.
- (5) On the death of a partner his estate is entitled to interest at 5% or some other appropriate rate, on the balance due, from the date of death to the date of payment.

Some other important provisions of the Act are:

- (1) The partnership books are to be kept at the business premises or principal office and every partner must have access to them.
- (2) Partners must not work for competing businesses without the consent of the other partners. Any profits so made must be brought into the partnership.
- (3) Every partner is entitled to take part in the management of the business.

Table 6.1 Main Differences Between a Sole Trader, a Partnership and Limited Companies

	<i>Sole Trader</i>	<i>Partnership</i>	<i>Limited Company</i>
Ownership	One owner	Normally no more than twenty. Rights and duties set out in an agreement – partner’s rights and duties may not be identical. Change of ownership must be agreed by all	Divided into shares (two or more, even for public companies). Rights of shareholders in each class of shareholding defined in company’s memorandum and articles. Each share of a class ranks equally. Great sub-division of ownership possible. Disposal of shares may not require consent of company.
Risk to owners’ personal assets	Unlimited	Unlimited. Any full partner is responsible for all the firm’s debts	Limited to the amount per share normally paid when shares first issued
Management of firm	Decided by sole trader	By agreement between the partners	By board of directors who are elected by the shareholders annually
Information publicly available	None: business name has to be registered if it is not owner’s name	None: partnership name has to be registered if it is not partners’ names	File maintained at Companies House which contains legal documents of formation. Annual return showing directors, accounts, register of members open for inspection. Audit required by independent accountant. Dept. of Trade and Industry has supervision of all companies
Withdrawal of profits	As owner decides	As partners decide	By dividend to shareholders – may be a fixed amount or vary depending on class of share. Decided by directors

	<i>Sole Trader</i>	<i>Partnership</i>	<i>Limited Company</i>
Withdrawal of capital	As owner decides	As partners decide	Repayment of capital strictly controlled by legal procedure
Acquisition of new funds other than from profits	Dependent on owner's personal assets or his ability to borrow, therefore limited expansion	Dependent on partners' personal assets or introduction of additional partners. Therefore expansion, though greater than sole trader, still has an absolute limit. New partners mean changes in profit distribution	Issue of further shares or debentures but may change 'power' balance in firm. Issue of debentures secured on the assets, limited by the amount of security available. As investors' risk is limited the total contribution is likely to be greater than for sole traders and partnerships so that expansion is unlimited
Articles of Government	None	Agreement, verbal or written	Memorandum and Articles of Association
Law (major areas)	Case, Statute and Common Law	Partnership Act 1890; Limited Partnership Act 1907; Case, Statute and Common Law	Companies Acts 1948 and 1967; Case and Statute Law

(4) The partnership must indemnify every partner for payments or liabilities incurred, in the ordinary course of business, for the preservation of the firm's property or business.

Partnership Accounts

There is no difference in the book-keeping for a partnership. The year-end adjustments and the final accounts are prepared in exactly the same way as a sole trader, except for the treatment of the proprietor's interest and the changes to it.

It is usual to have two accounts for each partner, one which records his capital investment in the business and the other which is his current account, through which all transactions affecting the partner will pass. Capital accounts do not normally change.

The current account is credited with the share of the profits, interest received and other specific income. It is debited or charged with cash withdrawn, interest and the cost of stock withdrawn.

Prior to the division of profits it is often agreed to compensate the partners for loss of income which could have been earned by investing their funds elsewhere. Where a partner has provided a substantial amount of capital but takes little part in the management and is only entitled to a small share of the profits this interest acts as compensation. These divisible profits are reduced by the interest charge.

Similarly where a partner devotes considerable time or expertise but little capital he would be compensated by way of salary, this also appearing as a charge prior to profit sharing.

Entries in the accounts would be:

On formation:	Dr. Various Asset Accounts Cr. Individual Capital Accounts	} Assets Introduced
Profits earned:	Dr. Profit and Loss Account Cr. Individual Current Account	} Partners' share of the profits
Drawings:	Dr. Individual Current Account Cr. Cash	} Amounts withdrawn
Interest received on Capital:	Dr. Profit and Loss Account Cr. Current Account	} Amount of interest based on the capital
Interest payable on overdrawn accounts	Dr. Current Account Cr. Profit and Loss Account	} Amount charged on over-drawn account

It is easier to use a columnar form when writing up the partners' accounts as this aids accuracy and speed.

A, B and C decided to form a partnership and share profits and losses in the ratio 3 : 2 : 1.

A introduces the following assets:	buildings at valuation	£6,000
	motor vehicles	300
B introduces the following assets:	debtors	2,000
	cash	1,500
C introduces the following assets:	stock	2,300
	cash	1,200

Capital Account

	A	B	C		A	B	C
				Buildings	6,000		
				Car	300		
				Debtors		2,000	
				Cash		1,500	1,200
				Stock			2,300
Bal. c/d	6,300	3,500	3,500				
	<u>£6,300</u>	<u>3,500</u>	<u>3,500</u>		<u>£6,300</u>	<u>3,500</u>	<u>3,500</u>
				Balances	£6,300	3,500	3,500

Buildings

Capital Account	6,000
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Motor Vehicles

Capital Account	300
-----------------	-----

Debtors

Capital Account	2,000
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Cash

Capital Account (B and C)	2,700
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Stock

Capital Account	2,300
-----------------	-------

They decided to have fixed capital accounts, A £5,000; B £3,600; C £3,000; any excess or deficiency should be transferred to the current accounts:

Capital Accounts

	A	B	C		A	B	C
Transfer to				Balance b/d	6,300	3,500	3,500
Current a/c	1,300	—	500	Transfer to			
Balance b/d	5,000	3,600	3,000	Current a/c	—	100	—
	<u>£6,300</u>	<u>3,600</u>	<u>3,500</u>		<u>£6,300</u>	<u>3,600</u>	<u>3,500</u>
				Balance b/d	5,000	3,600	3,000

Current Accounts

	A	B	C		A	B	C
Capital a/c		100		Capital a/c	1,300	—	500

At the end of the first year:

Profit	£12,000
Drawings	A £5,000
	B £2,500
	C £2,000

Current Accounts

	A	B	C		A	B	C
Balance b/d		100		Balance b/d	1,300	—	500
Drawings	5,000	2,500	2,000	Profit	6,000	4,000	2,000
Balance c/d	2,300	1,400	500		<u>£7,300</u>	<u>4,000</u>	<u>2,500</u>
	<u>£7,300</u>	<u>4,000</u>	<u>2,500</u>	Balance b/d	2,300	1,400	500

The second year they decided:

Direct charge to A £6,000 for purchases

Special commission to C £500

Drawings A £6,050; B £2,000; C £2,000

Capital was to earn 5% interest; profit before interest adjustments, £15,580.

Current Accounts

	A	B	C		A	B	C
Drawings	6,050	2,000	2,000	Balances	2,300	1,400	500
Purchases	6,000			Commission			500
Balance c/d	—	4,580	1,650	*Interest (580)	250	180	150
				Profit	7,500	5,000	2,500
				(15,580 – 580)			
				Balance c/d	2,000	—	—
	<u>£12,050</u>	<u>6,580</u>	<u>3,650</u>		<u>£12,050</u>	<u>6,580</u>	<u>3,650</u>
Balance b/d	2,000	—	—	Balance b/d	—	4,580	1,650

* A 5% of 5,000 = 250
 B 5% of 3,600 = 180
 C 5% of 3,000 = 150
580

In the third year they agreed that: (1) overdrawn current accounts would carry 10% interest; (2) B worked in the business full time and was to have a salary of £2,000 p.a.; (3) the profit before adjustments was £11,400:

Current Accounts

	A	B	C		A	B	C
Balance b/d	2,000			Balance b/d		4,580	1,650
*Interest	200			Salary		2,000	
Balance c/d	2,600	9,780	3,250	Profit for † Year	4,800	3,200	1,600
					<u>£4,800</u>	<u>9,780</u>	<u>3,250</u>
	<u>£4,800</u>	<u>9,780</u>	<u>3,250</u>	Balance b/d	2,600	9,780	3,250

*10% of 2,000 = £200 on overdrawn account.

† Profit calculated:

Profit and Loss Account

Salary to B	2,000	Bal.	11,400
Balance:		Interest	
A $\frac{1}{2}$ 4,800		Charged	
B $\frac{1}{3}$ 3,200		to A	200
C $\frac{1}{6}$ 1,600			
	<u>9,600</u>		
	<u>£11,600</u>		<u>£11,600</u>

Note that the interest charged to A is shared between all the partners so that A only suffers £100 charge (£200 charge less $\frac{3}{6}$ of 200 = 100). To give full effect to the charge on A it could have been agreed that B and C share the charge in their profit-sharing ratio

$$\begin{array}{r} B = 2 \quad 133 \\ C = 1 \quad \underline{67} \\ \hline 200 \end{array}$$

No adjustment in the profit calculation is necessary.

Changes in the Partnership

It becomes necessary to review the value of the partnership when the asset value of the firm has changed and it has not been reflected in the accounts. For example, freehold land may have increased in value and plant become obsolete.

Revaluation of assets is particularly important before a new partner is brought into the business, so that the old partners receive full credit for the changes which occurred while they managed the firm. The revaluation in its simplest form requires only the adjustments of the original partners' current accounts with their share of the profit or loss on revaluation.

The sequence of events is as follows: (1) calculate through a Revaluation Account the profit or loss on the change in value of the net assets; (2) adjust the partners' current accounts for their share of the profits or losses; (3) where a new partner is being introduced, create his capital and current accounts and increase the asset accounts by the assets introduced; (4) make any necessary adjustment between the capital and current accounts; (5) where an asset is not to appear at its revalued figure in the accounts write off the necessary amount against the partners' current accounts in the *new* profit-sharing ratio.

Although an asset may, at the date of revaluation, have a higher value than its book value the partners may wish to adopt the concept of prudence and not anticipate profits until they are realised. By writing the capital profit off in the new profit-sharing ratio this will automatically ensure that when the asset is realised the partners receive the benefit in accordance with the profit-sharing ratio, taking into consideration the period of time the various partners have been involved in the firm.

X and Y had been in partnership and then admitted Z: X and Y had freehold property valued in the books at £8,000
 When Z joined (one year later) £12,000
 When sold (two years later) £22,000

<i>Current Account Method</i>			
	X	Y	Z
Profit on Revaluation £4,000	2,000	2,000	—
Written off	(1,333)	(1,334)	(1,333)
Balance	667	666	(1,333)
Profit on Sale 22,000—8,000 = 14,000	4,667	4,667	4,666
Final Profits	£5,334	5,333	3,333

<i>Apportionment</i>				
	Profit on Sale £14,000			
	X	Y	Z	
Yr. 1	4,000	2,000	2,000	—
Yr. 2	10,000	3,334	3,333	3,333
	14,000	5,334	5,333	3,333

Notice how the profit is apportioned on a time basis and divided between the partners at that time in the profit-sharing ratio.

Goodwill

It has been argued that goodwill is the difference between the value of the assets of the business and the amount of money which a purchaser would pay for the business as a going concern. There are various ways of calculating goodwill and the particular method selected will depend on the wishes of the partners.

It has also been argued that goodwill cannot exist and is only caused by the lack of accurate valuations of the assets forming part of a going concern.

The main problem with these arguments is in defining 'value'. As has been asked before, value to whom, for what and when?

It is intended here to treat goodwill as an asset which may or may not appear in the accounts, depending on the wishes of the partners.

L and M had been in business successfully for a number of years, sharing profits and losses equally, and have decided to introduce a new partner, P. The summarised partnership Balance Sheet was as follows:

<i>Balance Sheet</i>			
Fixed Assets			
Freehold Premises			6,000
Plant and Machinery			4,500
Motor Vehicles			2,500
			13,000
Net Current Assets			
			1,000
			<u>£14,000</u>
Capital Accounts			
L		5,000	
M		5,000	
			10,000
Current Accounts			
L	3,000		
M	1,000		
			4,000
			<u>£14,000</u>

P was to introduce a motor car valued at £2,000 and cash £4,000. It was also agreed that they would have fixed capital accounts of £3,000 each and share profits equally.

<i>Motor Vehicles</i>				<i>Net Current Assets</i>			
Balance	2,500	Bal. c/d	4,500	Balance	1,500	Balance c/d	5,500
Introduced by P	2,000			Introduced by P	4,000		
	<u>£4,500</u>		<u>£4,500</u>		<u>£5,500</u>		<u>£5,500</u>
Bal. b/d	4,500			Balance b/d	5,500		

Current Accounts

	L	M	P
Balance	12,000	10,000	–
Capital	2,000	2,000	3,000

Capital Accounts

	L	M	P		L	M	P
Current a/c	2,000	2,000	3,000	Balance	5,000	5,000	–
Balance	3,000	3,000	3,000	Motor Vehicle			2,000
	<u>£5,000</u>	<u>5,000</u>	<u>6,000</u>	Cash			4,000
					<u>£5,000</u>	<u>5,000</u>	<u>6,000</u>
				Bal. b/d	3,000	3,000	3,000

It was also decided that the goodwill should not appear in the Balance Sheet.

Current Accounts

	L	M	P		L	M	P
Goodwill	2,000	2,000	2,000	Balance	12,000	10,000	–
Balance c/d	12,000	10,000	1,000	Capital a/c	2,000	2,000	3,000
	<u>£14,000</u>	<u>12,000</u>	<u>3,000</u>		<u>£14,000</u>	<u>12,000</u>	<u>3,000</u>
				Bal. b/d	12,000	10,000	1,000

Goodwill

		L	M	P
Revaluation	6,000		2,000	
			2,000	
			2,000	6,000
	<u>£6,000</u>			<u>£6,000</u>

The Balance Sheet, after the introduction of P, was as follows:

<i>Balance Sheet</i>		
Fixed Assets		
Freehold Premises		20,000
Plant and Machinery		2,000
Motor Vehicles		4,500
Net Current Assets		5,500
		<u>£32,000</u>
Capital Accounts		
L	3,000	
M	3,000	
P	3,000	
		9,000
Current Accounts		
L	12,000	
M	10,000	
P	1,000	
		23,000
		<u>£32,000</u>

Many other changes to a partnership are possible, such as the change of profit-sharing ratios after a revaluation, the assets remaining at the old values. The same principle should be used: (1) calculate the profit/loss on revaluation; (2) credit the partners with the revaluation profit in the *original* ratio; (3) reverse the credit by writing it out in the *new* ratio.

Dissolution of a Partnership

Eventually a partnership may have to be dissolved as a result perhaps of disagreement, poor trade, retirement or death and the assets will have to be sold off, cash collected and the remaining capital returned to the partners.

A Realisation Account will be used to calculate the profit or loss on winding up the firm, by comparing the cost of the assets with the revenue obtained on their disposal. It is comparable with a Profit and Loss Account. The difference is the profit or loss which is transferred to the partners in the profit-sharing ratio.

Balance Sheet

Fixed Assets			
Plant and Machinery		12,000	
Motor Vehicles		3,000	
		<u>15,000</u>	
Current Assets			
Stock	5,000		
Debtors	4,000		
Bank	6,000		
	<u>15,000</u>		
Less Creditors	<u>3,500</u>		
		<u>11,500</u>	
		<u>£26,500</u>	
Capital Account			
	E	10,000	
	F	<u>5,000</u>	15,000
Current Account			
	E	6,500	
	F	<u>5,000</u>	<u>11,500</u>
			<u>£26,500</u>

The assets were disposed of as follows:

Sold: Plant and Machinery		7,000
Stock		8,000
Transferred: Motor Vehicles, to	E	500
	F	500
Realised: Debtors		3,600
Paid: Creditors		3,800

Plant and Machinery

Bal.	12,000	Realisation a/c	<u>12,000</u>

Motor Vehicles

Bal.	3,000	Realisation a/c	<u>3,000</u>

Capital Accounts

	E	F		E	F
Loss on Realisation	2,350	2,350	Balance b/d	10,000	5,000
Bank	13,650	7,150	Current a/c	6,000	4,500
	<u>£16,000</u>	<u>£9,500</u>		<u>£16,000</u>	<u>£9,500</u>

Current Accounts

	E	F		E	F
Realisation:			Balance b/d	6,500	5,000
Cars	500	500			
Capital a/c	6,000	4,500			
	<u>£6,500</u>	<u>£5,000</u>		<u>£6,500</u>	<u>£5,000</u>

Stock

Balance	5,000	Realisation a/c	<u>5,000</u>
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Debtors

Bal.	4,000	Realisation a/c	<u>4,000</u>
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Realisation

Plant and Machinery	12,000	Bank re Plant	7,000
Motors	3,000	Stock	8,000
Stock	5,000	Debtors	3,600
Debtors	4,000	Tfs. E. Car	500
Additional Creditors	300	F Car	500
	<u>£24,300</u>	Capital a/c Loss E 2,350	
		F 2,350	4,700
			<u>£24,300</u>

Creditors

Cash	£3,800	Balance	3,500
		Realisation a/c	300
	<u>£3,800</u>		<u>£3,800</u>

Bank

Balance	6,000	Creditors	3,800
Debtors	3,600	E	13,650
		F	7,150
Plant	7,000		
Stock	8,000		
	<u>£24,600</u>		<u>£24,600</u>

Note: The last transaction is always the cash settlement of the Capital Accounts because immediately prior to that the Balance Sheet appears:

Assets: Cash	<u>£20,800</u>
Capital a/c E	13,650
F	7,150
	<u>£20,800</u>

All losses or profits have been shared between the partners. The assets may be transferred directly to the partners, which is normal where one of the partners intends to carry on the business.

One problem which arises on the dissolution of a partnership is the delay which may occur between the disposal of individual assets and the ascertaining of the overall profit or loss. The partners will require payment of available cash. If care is not taken overpayment to one partner could arise, as the extent of any losses will not be known until all cash has been received. One method which can be used when the partners are to be paid periodically is that the remaining assets not yet realised or transferred should be treated as a loss and written off against the partners' accounts. This will leave their accounts equal to the cash and will show the amount each partner is to receive.

Immediately after the distribution the assumed loss is cancelled pending further receipts of cash. This operation is repeated every time the partners receive a payment.

Balance Sheet

Net Assets	<u>£14,000</u>	1st Cash receipt	£6,000
		2nd cash receipt	£5,000
		Final receipt	£7,000
Partners: a/c R	9,000		
S	<u>5,000</u>		
	<u>£14,000</u>		<u>£18,000</u>
<i>Partners' Accounts</i>		R	S
Balances		9,000	5,000
Less assumed loss		4,000	4,000
(14,000 - 6,000 = 8,000, split equally as no agreement)			
		<u>5,000</u>	<u>1,000</u>
Less cash paid (6,000)		(5,000)	(1,000)
		<u>9,000</u>	<u>5,000</u>
Original Capital b/f		9,000	5,000
1st payment		5,000	1,000
Balance		4,000	4,000
Less assumed loss (8,000 - 5,000 = 3,000)		1,500	1,500
		<u>2,500</u>	<u>2,500</u>
Less cash paid (5,000)		(2,500)	(2,500)
		<u>9,000</u>	<u>5,000</u>
Original Capital b/f		9,000	5,000
1st and 2nd payment		7,500	3,500
Balance		1,500	1,500
Profit on final settlement		2,000	2,000
(3,000 - 7,000 = 4,000 or 18,000 - 14,000 = 4,000)			
Final Settlement		<u>£3,500</u>	<u>£3,500</u>

<i>Summary</i>	R	S
Balances	9,000	5,000
Profit (18,000 - 14,000)	<u>2,000</u>	<u>2,000</u>
	11,000	7,000
Cash paid: 1st 5,000		1,000
2nd 2,500		2,500
3rd 3,500		<u>3,500</u>
	<u>11,000</u>	<u>7,000</u>

Where a partner has a debit balance on his account on realisation and does not have personal assets which he could use to pay the debt (the partner is bankrupt) the other partners will have to bear that partner's debt in their profit-sharing ratio or, where there is no agreement, in the ratio of their last agreed capital balances (*Garner v. Murray*).

Questions

6.1 H and R were partners, sharing profits and losses in the proportions H two-thirds and R one-third. Their balance sheet at 31 October was as follows:

Balance Sheet

Capital Accounts			
H	20,000	Fixed Assets	12,800
R	<u>8,000</u>	Current Assets	20,600
	28,000		
Creditors	5,400		
	<u>£33,400</u>		<u>£33,400</u>

R has proposed that, as from 1 November, X Ltd should take over all the assets and liabilities of the partnership and that the purchase price should be £40,000, to be satisfied by the issue of 32,000 ordinary shares in X. Ltd, at a valuation of £1.25 each.

The issued share capital of X. Ltd, before putting the above proposal into effect, was 36,000 ordinary shares of £1 each, 32,000 of which were held by R.

You are to assume that the assets of the partnership are shown in the above Balance Sheet at fair valuations and that a fair valuation of the goodwill of the partnership business is £5,000.

You are also to assume that the whole business of X. Ltd, at the date of the proposal, is fairly valued at £45,000.

You are required to show the closing entries that would be made in the partnership books if the foregoing proposals were put into effect, and to give your views on the proposals, assuming that H asked your advice.

6.2 Richmond, Merton and Tolworth carried on a retail business in partnership. The partnership agreement provided that:

(1) The partners are to be credited at the end of each year with salaries of £1,000 to Richmond and £500 each to Merton and Tolworth and with interest at the rate of 5% per annum on the balances at the credit of their respective capital accounts at the beginning of the year.

(2) No interest is to be charged on Drawings.

(3) After charging partnership salaries and interest on capital, profits and losses are to be divided in the proportion: Richmond 50%, Merton 30% and Tolworth 20%.

The Trial Balance of the firm at 31 December was:

	DR.	CR.
Partners' Capital Accounts:		
Richmond – Balance 1 Jan.		8,000
Merton – Balance 1 Jan.		5,000
Tolworth – Balance 1 Jan.		3,000
Partners' Current Accounts		
Richmond – Balance 1 Jan.		1,600
Merton – Balance 1 Jan.		1,200
Tolworth – Balance 1 Jan.		800
Sales		46,500
Trade Creditors		3,700
Shop Fittings at cost	3,600	
Shop Fittings Provision for depreciation 1 Jan.		1,400
Freehold Premises – cost	6,000	
Leasehold premises – purchased during the year	4,500	
Leasehold premises – additions and alterations	2,500	
Purchases	28,000	
Stock on hand, 1 January	4,200	
Salaries and Wages	6,400	
Office and Trade Expenses	4,520	
Rent, Rates and Insurance	1,050	
Professional Charges	350	
Debtors	2,060	
Provision for doubtful Debts, 1 Jan.		50
Balance at Bank	4,370	
Drawings, other than monthly payments		
Richmond	1,700	
Merton	1,100	
Tolworth	900	
	<u>£71,250</u>	<u>£71,250</u>

You are given the following additional information:

- (1) Stock on 31 December was valued at £3,600.
- (2) A debt of £60 is to be written off and the provision against the remaining debtors should be 5%.
- (3) Salaries and Wages include the following: monthly drawings by the partners: Richmond £50, Merton £30, Tolworth £25.
- (4) Partners had during the year been supplied with goods from stock and it was agreed that these should be charged to them as follows: Richmond £60, Merton £40.
- (5) On 31 December rates paid in advance and office and trade expenses owing were £250 and £240, respectively.
- (6) Depreciation of shop fittings is to be provided at 5% per annum on cost.
- (7) Professional charges include £250 fees paid in respect of the acquisition of the leasehold premises, which fees are to be capitalised.
- (8) The cost of and the additions and alterations to the leasehold premises were to be written off over 25 years, commencing on 1 January in the year in which the premises were acquired.

You are required to prepare: (a) the trading and Profit and Loss Account for the year ended 31 December; (b) the Balance Sheet as on that date; (c) partners' Current Accounts in columnar form for the year ended 31 December.

6.3 X, Y and Z were partners, sharing profits and losses in the proportions X one-half, Y one-third, Z one-sixth. The Balance Sheet of the firm as on 31 March was:

<i>Balance Sheet</i>			
Capital accounts:		Fixed assets	7,500
X	8,320	Current assets:	
Y	5,160	Stock in trade	9,370
Z	<u>1,930</u>	Debtors	6,845
Creditors	11,390	Balance at bank	<u>3,085</u>
	<u>£26,800</u>		<u>19,300</u>
			<u>£26,800</u>

On 1 April the goodwill, fixed assets and stock in trade were sold to AB. Ltd for £20,000. On the same day, the purchase consideration was satisfied as to £14,000 in cash, and as to the balance by the issue of 4,500 shares in AB Ltd. valued at £1.33 each.

The firm's debtors included £30 due from M and £120 due from N. Both of these debts had been guaranteed personally by Y.

By 10 April, £2,970 had been collected from the firm's debtors. On that day, the creditors were paid subject to discounts amounting to £175. The shares in AB. Ltd were divided in the proportions X one-half, Y one-third and Z one-sixth, and all the available cash was paid out to the partners in such proportions as to exclude the possibility of an overpayment being made to any partner.

Between 11 April and 30 April a further £3,600 was collected from the firm's debtors, including £30 from M. The remaining debts, including N's debt of £120 were regarded as bad.

The final distribution of cash was made on 30 April.

You are required: (1) to prepare the realisation account, the cash account and the capital accounts of the partners, distinguishing between the interim and final distributions of cash; and (2) to show your calculation of the interim distribution of cash on 10 April.

6.4 Two partners, A and B, draw salaries of £4,500 and £4,000, respectively, and share profits 5:3. Their capital accounts were A £15,000, B £9,000.

On 1 July they agree to admit C and D on the following terms: C to introduce £9,000 as Capital in the form of Plant and Equipment; D to bring in £4,000 as cash, and it was agreed that for the next three years £1,200 would be deducted from his salary and transferred to his capital account.

The partnership assets were revalued and the resulting capital profit, £12,000, transferred to A and B, in their profit-sharing ratios.

The new agreement included the following:

Salaries: A £5,000, B £4,500, C £3,000, D £3,000.

Interest on Capital: 8% on balances at end of year (no apportionment for part-years).

Profit-sharing ratios: A 8/18, B 5/18, C 3/18, D 2/18

The profit for the year to 31 Dec, after charging salaries on the old basis and before taking into account the above adjustments, was £25,516.

You are required to show the entries in the Profit and Loss Account and the capital and current accounts of the partners.

CHAPTER 7

Long-Term Finance: Share Capital and Debentures

Different types of trading organisation obtain their funds as follows:

(1) *The sole trader*. Private funds and loans from banks and friends. No legal requirements to be observed.

(2) *Partnerships*. Each partner contributes an amount from his private funds according to the partnership deed. Additional funds from banks or interested parties. Few legal restrictions.

(3) *Limited companies*. Funds obtained by approaching general public. Private companies restricted by Companies Act 1948 as to number they can approach. Public companies have no restriction on number contributing capital. Amount contributed only restricted by the terms of Memorandum of Association. Limited companies can approach banks and general public for loans. Individuals become members by applying for and being allotted shares in a company. The method of advertising and allotting is set out in the Companies Act 1948.

The Companies Act 1948

Section 26

(i) Persons who subscribe to memorandum are deemed to be members of the company.

(ii) Persons who agree to become members and whose names are entered in the share register shall be a member of the company.

Section 38

Prospectus must contain *inter alia* the following matters:

Minimum amount required to pay for

- (a) purchase price of any property;
- (b) preliminary expenses and commissions;
- (c) repayment of loans raised for either (a) or (b);
- (d) working capital.

The amount payable on application and allotment of shares.

The rights as to voting and dividends of the various classes of shares where the company has more than one class of share.

The amount of preliminary expenses/issue expenses and underwriting commission or rate of commission.

An auditors' report showing profits and losses for five years and assets and liabilities at last accounting date.

Section 47

Shares not to be allotted unless minimum subscription obtained. Amount payable on application must be at least 5% of nominal value of share. Application monies must be received within 40 days of issue of prospectus. In event of monies being returned this must be carried out within a further eight days.

Section 50

Prospectus must be in issue at least three days before any shares allotted.

Section 51

Where company is applying for permission to the Stock Exchange for the shares to be traded on the Exchange, application monies must be maintained in a separate bank account.

Section 53

Company may pay underwriting commission; must not exceed 10% of issue price of shares.

Section 56

If shares issued at a premium the premium must be placed in a Share Premium Account. This account may be used to write off:

- (a) preliminary expenses;
- (b) commissions;
- (c) discounts on issues;
- (d) the premium arising when redeeming preference shares.

Section 57

Company may only issue shares at a discount if,

- (a) company has been in business at least one year; and
- (b) company in general meeting has passed resolution agreeing to issue and the court has sanctioned scheme.

Section 66

A company may, if authorised by its Articles and if members so resolve, reduce its capital by cancelling any part of the shares previously paid for in order to extinguish the value of lost assets. Scheme requires court sanction.

Section 92

A contract to take up and pay for debentures can be enforced by an order for specific performance (there is no such provision in respect of share issues).

- N.B.*
- (i) Companies must retain receipts in a separate account pending successful conclusion of fund-raising operation.
 - (ii) No minimum amount is stated as nominal value of a share; this is at the discretion of the company when formed.
 - (iii) The account in which cash is placed, termed the Application and Allotment Account, is a form of sundry creditor. After allotment of the shares, the company treats the balance of money due, if any, as a sundry debtor.

Share Issues

A company offers shares of £1.00 each to the public, the full amount for each share being payable with the application.

<i>Bank Account</i>	<i>Application and Allotment Account</i>
£1,000,000	Cash Received on Application £1,000,000

After examination of application forms the board decides to allot the shares to applicants who become members of the company.

<i>Application and Allotment Account</i>	<i>Share Capital Account</i>
1 m. shares of £1 allotted — Share Capital £1 m.	Bal. b/d £1 m. 1 m. Shares of £1 allotted £1 m.

The members are creditors of the company, although they will never be repaid. Any member who wishes to withdraw will have to sell his share in the company (one or more shares) either through the company obtaining a buyer, if it is a private company, or via the stock market in the case of a public company.

A company will attempt to repay its capital when going out of business. In such circumstances the shareholders usually receive less than their original contribution because the company has lost its funds through adverse trading conditions.

Expenses Incurred in Company Formation and Share Issues

Formation or preliminary expenses include cost of registering the company, printing of Memorandum and Articles of Association, promoters' and solicitors' fees. Share issue expenses include cost of printing prospectus, advertising the issue, auditors' fees, underwriters' commission, etc.

Such expenses will be met from the proceeds of the share issue, thus reducing the funds available for purchase of fixed assets and provision of working capital.

The company in the previous example incurs formation expenses of £125,000 and issue expenses of £80,000.

<i>Bank</i>			
Balance b/d	1,000,000	Formation Cost	125,000
		Issue Expenses	80,000
		Balance c/d	795,000
	<u>£1,000,000</u>		<u>£1,000,000</u>
Balance b/d	795,000		

Balance Sheet

Share Capital 1 m. shares of £1 each	£1,000,000		
	<u>£1,000,000</u>		
Bank	795,000		
Capital expenses not written off:		Assets	£795,000
Formation Costs	125,000	Shares	<u>1,000,000</u>
Issue Expenses	80,000		
	<u>£1,000,000</u>		

Shareholders only have 79½p per member represented by assets.
Balance has been used for expenses; these will be charged against future profits.

Shares Issued at a Premium

In order to prevent the capital of the company being used to meet the costs of formation and issue, the price at which the shares are offered will take into account both the capital required to finance the business and the expenses of the issue. This difference between the nominal value and issue price of the share is known as the 'Share Premium' and is a capital profit. It can be used to write off capital expenses as set out in Section 56.

Shares will also be issued at a premium if the promoter considers the company will attract considerable applicants and the market price is likely to commence above the nominal value. In the case of an existing company where the market value is already higher than the nominal value, the issue price will be commensurate with market price to eliminate excessive dealings.

If the company issues its 1m. shares of £1 at a price of £1.25 and incurs expenses of £205,000 the entries would be as follows:

<i>Bank</i>			
Application Monies 1 m. shares @ £1.25	1,250,000	Formation Expenses	125,000
		Issue Expenses	80,000
		Balance	1,045,000
	<u>£1,250,000</u>		<u>£1,250,000</u>
Balance	1,045,000		

Application and Allotment Account

Shares Allotted 1 m. @ £1.00 each	1,000,000	Bank	1,250,000
Share Premium 1 m. @ £0.25	250,000		
	<u>£1,250,000</u>		<u>£1,250,000</u>

Share Capital

	Shares Allotted	1,000,000
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Share Premium

Transfer from Formation Expenses	125,000	Application and Allotment a/c	250,000
Issue Expenses	80,000		
Balance	45,000		
	<u>£250,000</u>		<u>£250,000</u>
		Balance	45,000

Formation Expenses

Bank	<u>£125,000</u>	Transfer to Share Premium	<u>£125,000</u>
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Issue Expenses

Bank	<u>£80,000</u>	Transfer to Share Premium	<u>£80,000</u>
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Balance Sheet

Bank	<u>£1,045,000</u>	Members' capital is intact. There is a capital profit available to meet any further capital expenses. The shares are worth £1.04½:
Share Capital 1 m. shares of £1	1000,000	
Share Premium	45,000	
	<u>£1,045,000</u>	Assets <u>£1,045,000</u>
		Shares <u>1,000,000</u>

Underwriting of a Share Issue

In order to ensure that all the shares are applied for and thus to avoid the necessity of refunding monies after an unsuccessful issue, with consequent inability to commence trading or insufficient funds to carry out intended expansion, a company takes out an insurance against possible short-fall in applications. This insurance is known as 'Underwriting' and involves arranging with a finance house to pay for any shares not applied for by the public. The underwriter will charge a commission, the insurance premium, for his services.

The commission, when charged to the company, is written off against share premium or revenue profits.

The 1m. shares of £1.00 issued at £1.25 were underwritten at 3%. Formation and issue expenses were £205,000.

<i>Bank</i>			
1 m. applications at £1.25	1,250,000	Formation Expenses	125,000
		Issue Expenses	80,000
		Underwriting Commission	37,500
		3% of £1,250,000	242,500
		Balance c/d	1,007,500
	<u>£1,250,000</u>		<u>£1,250,000</u>
Balance b/d	1,007,500		
<i>Application Account</i>			
Shares Allotted	1,000,000	Bank	1,250,000
Share Premium	250,000		
	<u>£1,250,000</u>		<u>£1,250,000</u>
<i>Share Premium</i>			
Formation Expenses	125,000		250,000
Issue Expenses	80,000		
Underwriting	37,500		
	242,500		
Balance	7,500		
	<u>£250,000</u>		<u>£250,000</u>
		Balance	7,500
<i>Capital</i>		<i>Formation Expenses</i>	
	1 m. Shares @ £1 1,000,000	Bank	125,000
			Transfer to Share Premium 125,000

<i>Issue Expenses</i>		<i>Underwriting</i>	
Bank	£80,000	Bank	£37,500
	Transfer to Share Premium		Transfer to Share Premium
	80,000		37,500

Balance Sheet

Bank	<u>£1,007,500</u>	Note that due to payment of underwriting commission, assets have been reduced – members' holding now worth £1.0075
Share Capital	1,000,000	Assets
1 m. shares of £1	7,500	£1,007,500
Share Premium	<u>£1,007,500</u>	Shares
		£1,000,000

The underwriting commission is calculated on the total value of the share issue, this being the amount payable by the underwriter if there were no applications from the general public.

Where the underwriter is obliged to take up shares the commission will be deducted from the amount he is due to pay.

Using the original example of 1m. shares of £1 issued at £1.25 and assuming that the public only subscribed for 600,000 shares, the underwriters would be obliged to purchase the remaining 400,000 shares. They would, however, charge their commission of £37,500.

<i>Bank</i>			
600,000 applications @ £1.25	750,000	Formation Expenses	125,000
Underwriters	462,500	Issue Expenses	80,000
	<u>£1,212,500</u>	Balance	1,007,500
Balance	1,007,500		<u>£1,212,500</u>

<i>Application Account</i>			
600,000 shares of £1.00	600,000	Bank	750,000
Share Premium @ £0.25	150,000		
	<u>£750,000</u>		<u>£750,000</u>

<i>Underwriters</i>			
400,000 shares @ £1.25	500,000	Commission	37,500
	<u>£500,000</u>	Bank	462,500
			<u>£500,000</u>

Share Capital

	Application Account	600,000
	Underwriters	400,000
		<u>£1,000,000</u>

Share Premium

Formation Expenses	125,000	Application Account	150,000
Issue Expenses	80,000	Underwriters	100,000
Underwriting	37,500		
Balance	7,500		
	<u>£250,000</u>		<u>£250,000</u>
		Balance	7,500

Balance Sheet

Bank	<u>£1,007,500</u>
Share Capital	1,000,000
Share Premium	7,500
	<u>£1,007,500</u>

The company's financial state is exactly as in the previous example, since the whole of the issue has been taken up. The underwriters will have a controlling interest as they are the majority shareholder.

The share capital account is a control account on the individual member's account appearing in the share register. Periodically an audit will be carried out on the register to ensure that all transfers have been correctly recorded and that individuals have not sold more shares than originally held.

The entries for the following two share issues, both taking place on the same day, will be shown and the results compared.

Company A offered 10,750,000 shares of £0.20 each at a price of £0.70 each, payable in full on application in order to reduce short-term loans and to convert a private company to a public one. Minimum application was 200 shares.

Expenses would be £160,940 and the issue was underwritten at 1¼%. Applications totalled 186 m. shares and were allotted on an approximately 5% basis of number applied for, with a maximum of 5,000 shares. Applicants for up to 500 were balloted and drawn in the proportion to total applications.

Company B offered 800,000 shares of £0.10 each at a price of £0.85, payable in full on application. Minimum application 200 shares. The issue would convert a private company to a public one. Expenses would be £39,500 and the issue was underwritten at 1¼%. Applications totalled 236,325 shares from 91 applicants, who were all allotted their shares in full. Underwriters were required to take up the remaining 563,675 shares.

Company A

Bank

Application Monies – 186,000,000 @ £0.70 each	130,200,000	Applications Refunded 175,250,000 @ £0.70	122,675,000
		Issue Expenses	160,940
		Underwriting 1¼% on £7,525,000	94,062
		Balance	7,269,998
	<u>£130,200,000</u>		<u>£130,200,000</u>
Balance	7,269,998		

Application Account

10,750,000 shares Allotted @ £0.70	7,525,000	Bank	130,200,000
Refunds – Bank	122,675,000		
	<u>£130,200,000</u>		<u>£130,200,000</u>

Share Capital

		10,750,000 Shares @ £0.20	£2,150,000
--	--	---------------------------	------------

Share Premium

Issue Expenses	160,940	10,750,000 Shares @ £0.50	5,375,000
Underwriting	94,062		
Balance	5,119,998		
	<u>£5,375,000</u>		<u>£5,375,000</u>
		Balance	5,119,998

Share Issue Expenses

Bank	<u>£160,940</u>	Transfer to Share Premium	<u>£160,940</u>
------	-----------------	---------------------------	-----------------

Underwriting

Bank	<u>£94,062</u>	Transfer to Share Premium	<u>£94,062</u>
------	----------------	---------------------------	----------------

Balance Sheet

Bank	<u>£7,269,998</u>
Share Capital	2,150,000
10,750,000 Shares @ £0.20	
Share Premium	5,119,998
	<u>£7,269,998</u>

Company B

Bank

Application Monies 236,325 @ £0.85	200,876	Expenses	39,500
Underwriters	470,624	Balance	632,000
	<u>£671,500</u>		<u>£671,500</u>
Balance	632,000		

Application and Allotment

Shares Allotted General Public 236,325 @ £0.85	200,876	Bank	200,876
	_____		_____

Share Capital

	800,000 @ £0.10	80,000
--	-----------------	--------

Share Premium

Expenses	39,500	800,000 @ £0.75	600,000
Underwriting	8,500		
Balance c/d	552,000		
	<u>£600,000</u>		<u>£600,000</u>
		Balance b/d	552,000

Share Issue Expenses

Bank	<u>39,500</u>	Transfer to Share Premium	39,500
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Underwriting

Underwriters	<u>8,500</u>	Transfer to Share Premium	8,500
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Underwriters

Shares Allotted 563,675 @ £0.85	479,124	Commission, 1¼% of 680,000	8,500
		Bank	470,624
	<u>£479,124</u>		<u>£479,124</u>

Balance Sheet

Bank	<u>£632,000</u>
Share Capital	80,000
800,000 Shares @ £0.10	
Share Premium	<u>552,000</u>
	<u>£632,000</u>

Note:

Public Allotted	200,876
Underwriter	<u>479,124</u>
	680,000
Capital	600,000
Premium	<u>80,000</u>
	<u>680,000</u>

Comparison of the two issues

(1) Company A will have a large number of shareholders, no member having a controlling interest or more than 5,000 shares.

(2) Company B has few shareholders, the underwriters becoming the majority shareholder and controlling the company.

(3) The market price of shares in Company A will be above the issue price as unsuccessful applicants attempt to buy shares in the market.

(4) The shares of Company B, however, will fall below the issue price as the underwriters attempt to sell their holding. They may not reach the issue price, with resultant depressing effect on future share issues.

(5) Company A will require profits of £258,000 after tax to pay a dividend of 12% on the nominal capital. This requires a return on assets employed of 3½%:

£258,000

7,269,998

(6) Company B will only require profits of £9,600 for a dividend of 12% on nominal capital, which will require a return of 1½% on the assets employed:

£9,600

632,000

Debenture Issues

The procedure for the issue of debentures is the same as outlined for a share issue, with the exception that there is no legal restriction on the issue of a debenture at a price below its nominal value (i.e. issued at a discount). The discount is either written off to the Share Premium at the time of issue or to revenue reserves over the life of the debentures.

Where they have not been written off, any expenses on the issue of shares and debentures must be shown on the Balance Sheet.

A company issues a £200,000 10% debenture at a price of £96 for every £100 (i.e. at a discount of 4%), payable in full on application:

<i>Bank</i>	<i>10% Debentures</i>										
Appcs. 2,000 @ £96 192,000	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Bank</td> <td style="text-align: right; padding: 2px 5px;">192,000</td> </tr> <tr> <td style="padding: 2px 5px;">Discount</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">@ 4% on</td> <td></td> </tr> <tr> <td style="padding: 2px 5px;">£200,000</td> <td style="text-align: right; padding: 2px 5px;">8,000</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; padding: 2px 5px;">£200,000</td> </tr> </table>	Bank	192,000	Discount		@ 4% on		£200,000	8,000		£200,000
Bank	192,000										
Discount											
@ 4% on											
£200,000	8,000										
	£200,000										

Discount on Debenture

Debenture a/c	8,000	Transfer to Share Premium or to Profit and Loss	<u>8,000</u>
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The company is obliged to pay 10% interest on £200,000 annually, even though they only received £192,000, and will eventually repay £200,000, together with any agreed premium.

Repayment of Capital and Loans

The rights of creditors of a company take precedence over those of shareholders. The Companies Act recognises this fact when restricting the repayment of capital, the conditions set out in Sections 66 (funds no longer required) and 58 (redeemable preference shares).

Section 58

Issue of Redeemable Preference Shares must have been authorised by Articles:

- (a) Repayment only possible if shares are fully paid.
- (b) Proceeds may be obtained from new issue of shares or profits retained by company.
- (c) If repayment takes place out of profits an amount equivalent to nominal value of the redeemed shares must be transferred from revenue profits to a Capital Redemption Reserve Fund.
- (d) The Capital Redemption Reserve Fund may only be used for the purpose of issuing bonus shares (fully paid).
- (e) Where Preference Shares are redeemed at a premium this must be provided out of profits or share premium.

Whilst the Act refers to repayment out of profits this in fact means the use of the company's assets representing the retained profits of the company. Capital can only be repaid in cash and this is obtained either by issuing new shares or by disposing of assets and using the proceeds. In the latter case funds which would have been available for creditors are reduced and could be further reduced if dividends were declared out of available profits and then distributed in cash.

Balance Sheet

Ordinary Capital		100,000
100,000 Shares of £1		
Redeemable Preference Capital, 50,000 Shares of £1		50,000
		150,000
Profit and Loss		50,000
		£200,000
Fixed Assets		
Plant and Equipment		120,000
Current Assets		
Stock	4,000	
Debtors	1,000	
Investments	5,000	
Bank	100,000	
	110,000	
Current Liabilities		
Creditors	30,000	
		80,000
		£200,000

Creditors are covered by bank balance. The remaining current assets are of little value. Company repays the Preference Shareholders, which reduces the bank to £50,000.

<i>Bank</i>				<i>Redeemable Pref. Cap.</i>			
Bal.	100,000	Pref. Cap. Bal.	50,000	Bank	50,000	Bal.	50,000
			50,000				
	<u>£100,000</u>		<u>£100,000</u>				

The company now declares a dividend in view of the balance on the Profit and Loss Account. The payment eliminates the bank balance.

<i>Profit and Loss Account</i>				<i>Dividend Account</i>			
Div.	50,000	Bal.	50,000	Bank	50,000	P. and L.	50,000
	<u>50,000</u>		<u>50,000</u>				<u>50,000</u>

<i>Bank</i>			
Bal. b/f	50,000	Div. Paid	50,000
	<u>50,000</u>		<u>50,000</u>

Balance Sheet

Ordinary Capital		
100,000 Shares of £1		<u>£100,000</u>
Fixed Assets		
Plant and Equipment		120,000
Current Assets		
Stock	4,000	
Debtors	1,000	
Investments	5,000	
	<u>10,000</u>	
Current Liabilities		
Creditors	30,000	
	<u>30,000</u>	
Net Current Liabilities		20,000
		<u>£100,000</u>

Even if creditors were able to dispose of the current assets at Balance Sheet values, funds would be insufficient to pay them. It is to avoid this possibility that the Companies Act requires the setting up of a Capital Redemption Reserve Fund (CRRF) when shares are redeemed out of the assets of the company. The Profit and Loss must therefore equal the nominal value of the shares being redeemed.

Having repaid the Preference Shares the Profit and Loss balance is transferred to Capital Reserve.

<i>Profit and Loss Account</i>		<i>CRRF</i>	
Trans. to CRRF	£50,000	Bal.	£50,000
			Trans. from P. and L. £50,000
<i>Balance Sheet</i>		<i>Bank</i>	
Ordinary Capital 100,000 Shares of £1		Bal.	100,000
Capital RRF	100,000 50,000	Redptn. of Pref. Shares	50,000
	£150,000		
Fixed Assets			
Plant and Equipment	120,000		
Current Assets			
Stock	4,000		
Debtors	1,000		
Investments	5,000		
Bank	50,000		
	60,000		
Current Liabilities			
Creditors	30,000		
			30,000
			£150,000

Creditors can be paid; the company will still have further funds available for other purposes. There is no possibility of declaring a dividend, as revenue reserves have been transferred to capital.

The CRRF, being a capital reserve, is part of the capital structure and total capital remains at £150,000 after redemption.

Redemption by New Share Issue

A company has in issue £100,000 of 7% £1 Redeemable Preference Shares and decides to repay them from the proceeds of a new issue of shares. These may be the same or a different class of shares.

<i>Bank</i>		<i>7% Redeemable Pref. Cap.</i>	
Bal. (say)	2,000	Bank	£100,000
New Share Issue	100,000	Bal.	£100,000
100,000 £1 Ord. Shares			
	£102,000	Repayment of Redeemable Pref. Cap.	100,000
		Balance c/d	2,000
			£100,000
			£102,000
Balance b/d	2,000		

No change in total capital or cash resources. The company has dispensed with fixed dividend and will only declare a dividend in accordance with profits.

Redemption at a Premium

Where it is decided to repay the Preference Capital at a price higher than the nominal value, i.e. at a premium, the company is not required to make the new issue at a premium. The premium paid will reduce the company's cash and profits. Shares will be repaid at a premium in an attempt to compensate the holders for their fixed dividend during inflationary trends, or to attract new investment.

A company has 800,000 £1 6% Redeemable Preference Shares in issue to be redeemed at a premium of 2%. It will raise a new issue to provide nominal value.

<i>Bank</i>		<i>Share Capital</i>	
Bal. (say)	20,000	Bank	800,000
New Share Issue	800,000		
		Repaymt. of Redeemable Pref. Cap	816,000
		Balance	4,000
	<u>£820,000</u>		<u>£820,000</u>
Balance	4,000		

<i>Profit and Loss</i>		<i>6% Redeemable Pref. Cap.</i>	
Premium on Redemptn. of Pref. Shares	16,000	Bank	816,000
Balance	1,000	Bal.	800,000
		Premium @ 2% (P. and L. a/c)	16,000
	<u>£17,000</u>		<u>£816,000</u>
			<u>£816,000</u>
	Balance		1,000

No change in total capital. Assets and profits are reduced.

If the company wishes to retain profits the new shares would be issued at a premium. Apart from the profit consideration, the shares would be issued at a price which corresponded to the market value. The premium obtained can be used to offset the premium on redemption.

A company decides to issue 700,000 £1 shares at a premium of £0.30 in order to redeem 700,000 £1 6% Preference Shares at a premium of 2%.

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<i>Bank</i>		<i>Share Capital</i>	
Bal. (say)	4,000	Paymt. to Pref. Sharehldrs	714,000
New Share Issue	910,000	700,000 £1 Shares @ 2%	
700,000 Shares @ £1.30		Balance	200,000
	<u>£914,000</u>		<u>£914,000</u>
Balance	200,000		

<i>Share Premium</i>		<i>6% Redeemable Pref. Cap</i>	
Premium on Redemptn. of Pref. Shares	14,000	Bank	714,000
Balance	196,000	Bal. Premium @ 2% (Share Premium)	700,000 14,000
	<u>£210,000</u>		<u>£714,000</u>
	<u>£210,000</u>		<u>£714,000</u>
Balance	196,000		

The company has improved its financial position. The Share Premium can be used for capital expenses or bonus issue of shares. There is no change in total capital.

Due to the new issue no transfer to revenue profits to capital reserve is necessary.

Redemption partially from new issues and existing resources.

Balance Sheet

Ordinary Share Capital		200,000
7% Redeemable Preference Share Cap.		500,000
Profit and Loss		250,000
		<u>£950,000</u>
Fixed Assets		800,000
Current Assets		
Stock	90,000	
Debtors	50,000	
Bank	<u>230,000</u>	
	<u>370,000</u>	
Less Creditors	<u>220,000</u>	
		<u>150,000</u>
		<u>£950,000</u>

Balance Sheet

Ordinary Capital		600,000
Capital Redemption Reserve Fund		100,000
		700,000
Share Premium		135,000
Profit and Loss		150,000
		£985,000
Fixed Assets		800,000
Current Assets		
Stock	90,000	
Debtors	50,000	
Bank	265,000	
	405,000	
Less Creditors	220,000	
		185,000
		£985,000

Note the effect of the change in capital structure, although total capital remains the same. The prior charge of £35,000 preference dividend is eliminated. Total dividend requirements may have increased. Assuming that the company was paying an ordinary dividend of 12%, total profit required was:

7% Preference Dividend	35,000
Ordinary Dividend (12% on 200,000)	24,000
	£59,000
 Total dividend will now be 12% on £600,000	 £72,000

Few additional funds have been introduced to generate further profits. This may cause a fall in the market price of the shares.

Loan Repayment

Where a company borrows money on the understanding that this will be repaid, provision should be made to ensure that funds are available on the due date. Even though a company is earning profits the cash equivalent may have been invested in assets and is not available for distribution to debenture holders.

The trust deed under which the loan was raised will specify the method of repayment, e.g. on a particular date, over a period of time or by purchase on the stock market as the holders make them available. Where repayment is on a fixed date the company may obtain the funds either by a new share issue or the raising

of a further loan. In the former case a change in the structure will have taken place. As a result the fixed interest payable, irrespective of whether the company earns profit or not, will be replaced by the ordinary dividend payable whenever profits are available. The rate of dividend may well be higher than the interest rate. Where repayment is from a new loan the interest will be at a higher rate than on the original loan with consequent effect on profit available for shareholders.

The Companies Acts do not lay down any regulations regarding debenture repayment as they do for Redeemable Preference Shares and it is therefore incumbent on companies to make the necessary arrangements prior to the date of repayment. This may be done by investing funds outside the business for the sole benefit of the debenture holders; the investments being sold as funds are required. The company at the same time must consider the rights of other creditors and must therefore restrict its dividend to the shareholders.

A company earning a profit of £20,000 shows the following Balance Sheet:

Fixed Assets	220,000
Stock	80,000
Debtors	30,000
Bank	30,000
	<u>£360,000</u>
Share Capital	200,000
Profit and Loss	30,000
Debentures	100,000
Creditors	30,000
	<u>£360,000</u>

The company has three alternatives: (1) declare and pay a dividend of 15%; (2) pay creditors; (3) purchase investments, thus retaining funds for debenture holders.

In order to prevent alternatives (1) and (2) the debenture trust deed will probably specify that a fixed sum is to be set aside out of profits to restrict dividend declaration and also require the equivalent cash to be invested.

When the debentures are repaid the profits retained become available to the shareholders, but only in the form of bonus shares as the corresponding cash has been used to repay the debenture.

A company has issued £500,000 4% debentures to be repaid at the end of twenty years and is to invest £25,000 per annum, transferring a similar amount to reserve.

<i>Bank</i>		<i>Debenture Investment</i>	
Bal. (say) 30,000	Purchased Investmts. 25,000	Bank 25,000	
<i>Profit and Loss</i>		<i>Reserve for Debenture Redemption</i>	
Trans. to Reserve for Debenture Rdemptn. 25,000	Bal. (say) 40,000		Trans. 25,000

At the end of 20 years the position will be:

<i>Investments</i>		<i>Reserve</i>	
Bal. 500,000		Bal. 500,000	

The investments are sold and the debenture repaid:

<i>Bank</i>		<i>Debenture</i>	
Sale of Investmts. 500,000	Debenture Holders 500,000	Cash Repaymt. 500,000	Bal. 500,000
<i>Reserve for Redemption of Debentures</i>		<i>Investments</i>	
	Bal. 500,000	Bal. 500,000	Bank 500,000

If the reserve is now transferred to capital and the same total dividend is paid there will be a fall in the rate, or if the rate is maintained additional profits will have to be earned.

The example ignores the question of repaying the debenture at a premium or selling the investments at a profit or loss. The premium and losses may be charged to the reserve, profits being credited. Any interest on the investment will be similarly credited and if the interest is subsequently invested will enable the annual charges to be reduced. The actual amount of annual investment under such conditions is determined by reference to actuarial tables.

A company has in issue a £200,000 debenture, repayable at the end of five years, and decides to invest £32,760 annually at 10% to ensure availability of funds on the due date.

<i>Bank</i>				
End, Yr. 2	Interest	3,276	End, Yr. 1 Purchase of Investmts. 32,760	
	3	6,880	2	36,036
	4	10,844	3	39,640
	5	15,204	4	43,604
			5	47,964

<i>Investments</i>		
Yr.	1 Bank	32,760
	2 Bank	<u>36,036</u>
		68,796
	3 Bank	<u>39,640</u>
		108,436
	4 Bank	<u>43,604</u>
		152,040
	5 Bank	<u>47,964</u>
		<u>£200,004</u>

There is no necessity to undertake the investment at the end of the fifth year. The investments costing £152,040 can be realised and the interest in the final year withdrawn from the bank together with the annual instalment of £32,760.

The investment of funds has no relationship to profits which could still be distributed if cash is available. To prevent such a possibility the corresponding sum must be transferred to reserve together with any interest on the investments. This is not credited to the Profit and Loss Account due to the fact that owing to reinvestment of the interest the annual charge to the Profit and Loss has been reduced.

<i>Reserve for Redemption of Debentures</i>		
Yr.1	Profit and Loss	32,760
	2 Interest	3,276
	Profit and Loss	<u>32,760</u>
		68,796
	3 Interest	6,880
	Profit and Loss	<u>32,760</u>
		108,436
	4 Interest	10,844
	Profit and Loss	<u>32,760</u>
		152,040
	5 Interest	15,204
	Profit and Loss	<u>32,760</u>
		<u>£200,004</u>

On realisation of the investments any profits or losses can be transferred to the reserve and on repayment of the debenture the reserve becomes available for distribution in the form of bonus shares to the shareholders.

The £200,000 debenture is repaid at a premium of 3%, the investments being sold for £207,000.

<i>Investments</i>														
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Balance</td> <td style="text-align: right;">200,004</td> </tr> <tr> <td>Profit to Reserve</td> <td style="text-align: right;">6,996</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 3px double black;">£207,000</td> </tr> </table>	Balance	200,004	Profit to Reserve	6,996		£207,000		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cash Sale Proceeds</td> <td style="text-align: right;">207,000</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 3px double black;">£207,000</td> </tr> </table>	Cash Sale Proceeds	207,000		£207,000		
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<i>Debentures</i>														
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Bank</td> <td style="text-align: right;">206,000</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 3px double black;">£206,000</td> </tr> </table>	Bank	206,000		£206,000		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Balance</td> <td style="text-align: right;">200,000</td> </tr> <tr> <td>Premium to Reserve</td> <td style="text-align: right;">6,000</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 3px double black;">£206,000</td> </tr> </table>	Balance	200,000	Premium to Reserve	6,000		£206,000		
Bank	206,000													
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	£207,000													
Balance	200,004													
Profit on Sale of Investmt.	6,996													
	£207,000													

Questions

7.1 A company was formed with an authorised capital of £350,000 in ordinary shares of 50p each. 200,000 shares were issued to the public at 70p and these were all taken up. Show the relevant accounts.

7.2 A company with an authorised capital of £500,000 in shares of 30p each proceeded to issue 500,000 shares at a price of 60p. All the shares were subscribed for. The issue was underwritten at 3%. Show the relevant accounts.

7.3 A company with an authorised capital of £600,000 in shares of 20p each issued 700,000 shares at a price of 90p. 1,200,000 shares were subscribed for. Underwriting commission was 4%. Show the relevant accounts.

7.4 A company whose authorised capital was £700,000 comprising 500,000 ordinary of £1 and 200,000 8% preference shares of £1, issued 300,000 ordinary shares at 1.70p each and 100,000 preference shares at £1.20 each. Applications were received for 700,000 ordinary and 150,000 preference shares.

Issue expenses, not including Underwriting Commission, were £12,800. The issue was underwritten at 4%. Show the relevant accounts and a Balance Sheet.

7.5 M. L. Finance Co. Ltd produces the following Balance Sheet:

Ordinary Share Capital	220,000	Fixed Assets	400,000
5% Redeemable Preference Shares	140,000	Investments	80,000
Profit and Loss Account	30,000	Bank	90,000
General Reserve	180,000		
	<u>£570,000</u>		<u>£570,000</u>

The preference shares are to be redeemed at a premium of 3%. In order to obtain part of the funds required the investments were sold at a profit of £3,500.

You are required to show the necessary accounts recording the above transactions, together with a Balance Sheet on completion.

7.6 M.J.R. Ltd was registered with an Authorised Capital of £500,000 comprising 300,000 ordinary shares of 50p each and 350,000 preference shares of £1 each.

The company issued a Prospectus offering all the ordinary shares at a price of 80p and 200,000 of the preference shares at £1.10 each. All amounts due were payable in full on application.

The issue was underwritten at 3%.

The ordinary shares were heavily oversubscribed and the company proceeded to allotment as follows:

<i>Applications</i>	<i>Total shares applied for</i>	<i>Basis of allotment</i>
Under 200 shares	55,000	Nil
200 – 499 Shares	100,000	In full
500 – 999 Shares	400,000	30%
1,000 and over	200,000	40%

The preference shares were only taken up to the extent of 60% of the offer, the remainder being allotted to the underwriters.

Formation Expenses amounted to £7,500. Issue Expenses, excluding underwriting commission, were £9,400.

Write up the relevant accounts to give effect to the above transactions and prepare a Balance Sheet on conclusion of all transactions.

7.7 In 19–0 Blue Sky Ltd issued at par 4,000 6% debentures of £10 each which were immediately paid up in full.

Debenture interest is payable half-yearly on 30 June and 31 December, and the interest due on 31 December 19–8 was paid on that date.

A sinking fund has been built up by appropriations out of profits.

On 1 January 19–9 the following balances appeared in the company's ledger:

6% Debentures	£40,000
Sinking Fund	£25,500
Sinking Fund investments (at cost)	£25,500

On 31 March 19–9 investments which had cost £8,720 were sold for £7,900. On the same day the company purchased in the open market 800 of its own debentures for £7,900 (inclusive of accrued interest). These debentures were immediately cancelled.

You are required to show the entries in the relevant accounts in the company's ledger, to record the transactions of 31 March, and bring down the balances on the debenture account, the sinking fund account, and the sinking fund investment account.

7.8 The Balance Sheet of a company was as follows:

<i>7% Redeemable Preference</i>			
Shares of £1	120,000	Fixed Assets	429,000
Ordinary Shares of £1	280,000	Current Assets	200,000
General Reserve	80,000	Bank	204,000
Profit and Loss	226,000		
	706,000		
Current Liabilities	127,000		
	£833,000		£833,000

The preference shares were redeemed at a premium of 10p each. 150,000 7½% debentures were issued at a price of 98. Show the necessary ledger accounts including cash, to record the above transactions and a Balance Sheet on completion.

7.9 The summarised Balance Sheet of A.C. Ltd, as on 31 March, was as follows:

Issued Share Capital:		Goodwill	7,000
40,000 6% Redeemable Pref. shares of £1 each, fully paid (redeemable on 29 April, at a premium of 10p per share)	40,000	Preliminary exps.	2,850
60,000 Ordinary shares of £1 each fully paid	60,000	Sundry assets	158,000
Share Premium Account	20,000	Balance at bank	27,250
Profit and Loss a/c	23,000		
Creditors	52,100		
	<u>£195,100</u>		<u>£195,100</u>

As part of the arrangements to effect the redemption of the preference shares of 29 April it had been decided to provide for the redemption of that part of the shares in issue which could not be otherwise redeemed, by an issue of new preference shares. Before doing so it had, however, been decided to write off the goodwill, preliminary expenses and discount on debentures (referred to below) but in such a way that the number of new shares to be issued should be the minimum possible.

The transactions during April were:

- (1) On 4 April the company issued for cash £12,000 7% debentures at a discount of 2½%.
- (2) On 6 April the goodwill, preliminary expenses and discount on debentures were written off.
- (3) On 12 April the company issued at par, for cash (paid in full on allotment), the minimum number of new shares of £1 each necessary to provide for the redemption of those preference shares in issue which could not otherwise be redeemed.
- (4) On 29 April the company redeemed the 6% preference shares together with one month's dividend thereon.
- (5) On 30 April the company made a bonus issue to the ordinary shareholders of one fully paid ordinary share of £1 for every five shares held.

You are required to set out, for the information of the directors, a pro forma summarised Balance Sheet of the company as it would appear immediately after completion of the above transactions. Ignore taxation and expenses.

CHAPTER 8

Capital Structure and Valuation

Considerations of raising finance – Capital Gearing

The promoters and subsequently the brokers of a company are required to bear in mind a number of factors when their company requires funds, both from the point of view of the investor and of the company. These might be summarised as in Table 8.1:

Table 8.1

<i>Ordinary shares</i>	<i>Preference shares</i>	<i>Debentures</i>
Dividend based on available profits	Dividend at a fixed rate will accumulate if not paid	Interest at a fixed rate is a charge on profits Non-payment will lead to appointment of manager acting on behalf of debenture holders until arrears paid
Non-payment of dividend will depress market price	Non-payment will only marginally affect price; may have side effect on ordinary share price	Repayable at a specified date – if not repaid, debenture holders can seize assets and sell off at any price to the detriment of other investors
No repayment of capital by company (unless company wound up)	May be repayment if of a redeemable class; will involve a new issue or depletion of funds	Rate of interest probably below rate of return on the funds invested
If capital not fully utilised, company may be paying dividend in excess of return on capital employed	Rate of dividend may be below rate of return on capital employed	

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If the company has issued an excess of loan and fixed dividend funds in relation to ordinary capital this may have an adverse effect on ordinary dividend movements and the level of profits required to meet the fixed charges.

The capital structure of two companies is as follows:

	<i>Company A</i>	<i>Company B</i>
Ordinary Shares of £1	6,000,000	1,000,000
5% Redeemable Preference Shares of £1	3,000,000	5,000,000
8% Debentures of £100	1,000,000	4,000,000
	<u>£10,000,000</u>	<u>£10,000,000</u>

Company A has a low-g geared capital structure. Excessive movements in profits will have little effect on percentage movements in dividends – the two will remain in line.

Company B has a highly geared capital structure and minor movements in profits will have a more than relative percentage movement in ordinary dividend – the two will not move in conjunction with each other.

Profits required to meet fixed charges:

8% on 1,000,000	80,000	8% on 4,000,000	320,000
5% on 3,000,000	<u>150,000</u>	5% on 5,000,000	<u>250,000</u>
	230,000		570,000

Company B is required to earn almost 2½ times the profit of A before being in a position to declare an ordinary dividend. If a dividend of 10% is required company A will require a total of £830,000 profits whilst company B will require £670,000. Company A, however, can suffer a 20% drop in profits and still pay 8½% ordinary dividend. A similar fall in profits of company B will, however, eliminate the ordinary dividend and also leave arrears of the preference dividend.

	<i>Company A</i>	<i>Company B</i>
Profits, Yr. 1	830,000	670,000
Debenture Interest	80,000	320,000
Preference Dividend	<u>150,000</u>	<u>250,000</u>
	<u>230,000</u>	<u>570,000</u>
Available for Ordinary Dividend	<u>£600,000</u> = 10%	<u>£100,000</u> = 10%

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<i>Company A</i>			<i>Company B</i>	
<i>Year 2: 20% fall in profits</i>				
Profits	664,000			536,000
Less fixed charges	<u>230,000</u>	Less Debenture Interest		<u>320,000</u>
Available for Ordinary Dividends	£434,000	Available for Preference Dividends		£216,000
Representing a fall of approx.	7¼% 20%	Required		250,000
		Arrears		<u>£ 34,000</u>
 <i>Year 3: A further fall of 10%</i>				
Profits	597,600			482,400
Fixed Charges	230,000	Less Debenture Interest		320,000
Available for Ordinary Dividends	<u>£367,600</u>	Available for Preference Dividends		<u>£162,400</u>
Representing a fall of approx.	6% 10%	Required (250,000 + 34,000)		<u>284,000</u>
		Arrears		<u>£121,600</u>
 <i>Year 4 : Increase in profits of 30%</i>				
Profits	776,880			627,120
Fixed Charges	<u>230,000</u>	Less Debenture Interest		<u>320,000</u>
Available for Ordinary Dividend	£546,880	Available for Preference Dividend		307,120
Representing an increase of	9% 50%	Required (250,000 + 121,600)		371,600
		Arrears		<u>£ 64,480</u>
 Even though profits have practically reached year 1 level an increase of 65% over year 3 will be needed to clear preference arrears and pay a 10% ordinary dividend.				
		Profits, Yr. 3 + 65% approx.		482,400 <u>313,500</u>
				795,900
		Debenture Interest		<u>320,000</u>
				475,900
		Preference Dividend (250,000 + 121,600)		<u>371,600</u>
				104,300
		Ordinary Dividend		100,000
		Retained		<u>£ 4,300</u>

Company A will be in a position to raise either additional preference capital or debentures, since both classes of creditors will appreciate that they are fully covered by current profits. Ordinary shareholders will be aware that any additional funds they subscribe will be used to generate additional profit. Their dividends are not at risk. Profits can fall 90% on year one before debenture interest is at risk.

Company B will have difficulty in raising funds of any description as ordinary shareholders see no return. Preference shareholders understand that a relatively small fall in profits 15% leaves their dividend in arrears, whilst debenture holders know that the ordinary capital employed is required to earn 32% to cover their interest and a 53% fall in profits will leave their interest in arrears, using year one basis.

Capitalisation of Profits

Investors in shares of a company anticipate a return on their capital by way of a dividend out of revenue profits paid in cash. The company may, however, have utilised the profit represented by cash for the purchase of fixed assets.

The company may at the same time have accumulated profits which by law they are not allowed to distribute in cash, e.g. share premiums, even if the cash is available, or they are profits not represented by available cash, e.g. capital reserve arising on revaluation of assets.

Other forms of non-distributable profits, in cash, are Capital Redemption Reserve Fund, Debenture Redemption Fund and pre-acquisition profits.

Where a company has such profits available a return to members can be made by the issue of what are termed bonus shares. The member makes no payment for these shares and is able, if he so desires, to sell these shares in the market, subsequently obtaining cash which represents a return on his original investment.

The issue of shares without payment of cash will have the effect of bringing the share market values into line with asset values and at the same time conserves the cash resources of the company. The issue may also serve to simplify the capital structure of the company.

The Balance Sheet value, nominal value and market value may be more closely related as the result of a bonus issue and at the same time the shares may become more marketable due to their lower price.

A further effect of a bonus issue may be a lowering of the rate of dividend which may not meet with market approval and may lead to a fall in market price. The rate of dividend paid on share capital will, however, more nearly represent a return on capital employed. For example:

Share Capital	£480,000 in £1 shares
Capital Employed	£1,560,000
Dividend Paid	15% £72,000
	= 4¾% on £1,560,000

Note that of the capital employed £1,080,000 was represented by retained profits of which £960,000 can be utilised by the bonus issue.

If the company makes a bonus issue of two shares for every one held the position is:

Share Capital (£480,000 + £960,000)	£1,440,000
Capital Employed	£1,560,000
Dividend Paid	72,000
= 5% on capital, 4¼% on capital employed.	

Balance Sheet

Fixed Assets	£440,000
Current Assets	340,000
	<u>£780,000</u>
Ordinary Share Capital	
600,000 shares @ 40p	240,000
Share Premium	130,000
CRRF	260,000
Profit and Loss	150,000
	<u>£780,000</u>

The shares have a Balance Sheet value of £1.30:

Total Assets £780,000
Shares 600,000

with a market value of, say, 75p in view of the absence of dividends.

The company can convert the retained profits into capital by the issue of shares to the members for which they will not be required to make a payment. The members are receiving scrip, which will increase their holding.

If the company decides to issue two additional shares for every one held the nominal value of such issue would be £480,000 and the Share Premium and CRRF can be utilised together with £90,000 from the Profit and Loss Account.

Accounting entries:

Share Premium

Capitalisation	<u>130,000</u>		Balance	<u>130,000</u>
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Capital Redemption Reserve Fund

Capitalisation	<u>260,000</u>		Balance	<u>260,000</u>
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Profit and Loss

Capitalisation	90,000		Balance	150,000
Balance	60,000			
	<u>£150,000</u>			<u>£150,000</u>
			Balance	60,000

Capitalisation

Transfer to Capital			
Scrip Issue		Share Premium	130,000
1,200,000 Shares		Capital Redemption	260,000
@ 40p	480,000	Profit and Loss	90,000
	<u>£480,000</u>		<u>£480,000</u>

Ordinary Share Capital

		Balance	240,000
		Scrip Issue	480,000
			<u>£720,000</u>

Balance Sheet (after issue)

Fixed Assets	440,000
Current Assets	340,000
	<u>£780,000</u>
Ordinary Capital	
1,800,000 Shares @ 40p	720,000
Profit and Loss Account	60,000
	<u>£780,000</u>

Shares are now worth 43p:

$$\frac{\text{Assets } £780,000}{\text{Shares } 1,800,000}$$

with a market value of, say, 22p resulting from the additional shares coming on to the market and a possible fall in the rate of dividend.

Dividend policy

Assume the company was paying 15%, which required annual profits of £36,000 (15% of £240,000). To maintain a 15% dividend will now require £108,000 (15% of £720,000) when the capital increase has not generated any additional funds. The profits previously earned will only enable a dividend of 5% to be paid:

$$\frac{£ 36,000 \times 100}{720,000}$$

and whilst this rate will be on three times the number of shares, the market is concerned with the rate of dividend as compared with competing companies.

A bonus issue indicates to members that profits have been ploughed back into the business. Whilst, as shown above, the market price may fall, making the shares easier to purchase, it will be necessary to purchase a larger quantity to gain control and there may be difficulty in obtaining the necessary number.

Rights issues

These issues arise when a company requires additional funds but wishes to restrict the issue to existing shareholders.

Members are informed of their rights on the basis of their existing holding, e.g. present capital 1,000,000 shares of £1 having a market price of £3.75. The company wishes to raise £800,000 and price the issue at £2.50 per share; they will therefore be issuing 320,000 shares. Members will be given the right to apply for 32 shares for every 100 held (or 8 for every 25).

The issue price will always be below market price as the company wishes existing shareholders to subscribe funds to the company and not to purchase on the market.

When members are sent details of their entitlement they will also be given the option of applying for additional shares, where the company is making a simultaneous public issue, or disposing of their rights to third parties. Members will not be selling their shares but disposing of the document authorising them to apply for shares (the rights letter).

The price of such rights is calculated as follows:

Cost of 100 shares at market price of £3.75		£375
Cost of 32 shares at issue price of £2.50		<u>80</u>
Cost of 132 shares		£455
Cost per share	$\frac{£455}{132} =$	£3.447
Market price		<u>3.75</u>
Rights per share		<u>£0.303</u>

A person taking over the rights would pay 32 x £0.303 to the present shareholder and 32 x £2.50 to the company, a total of £90 – the market price of new shares should be £2.80. This method of pricing rights ensures that outsiders do not pay less than the market price.

After the issue the normal market movements of supply and demand will affect the price as shareholders attempt to purchase additional shares or take a profit on their new shares.

A member who only partially takes up his right will set the proceeds from sale against cost of any entitlement:

Entitlement on present holding of 400 shares	128
Disposes of rights to 50 shares and receives 50 x £0.303 =	£15.15
Pays to company 78 shares at £2.50	<u>195.00</u>
Net cost for 78 shares	£179.85
Cost per share	£2.30

The accounting entries for a rights issue follow the procedure for a general capital issue. The company has increased its total capital with a minimal rise in the number of shareholders.

Apart from restricting the issue to present shareholders a rights issue has the advantages of economy in costs. The company is not involved in advertising and saves on administrative costs.

The effect on value of share can be seen as follows:

Before issue

Sundry Net Assets	<u>£1,400,000</u>	Shares have a Balance Sheet value of
Capital £1 Ordinary Shares	1,000,000	£1.40
Retained Profits	400,000	£1,400,000
	<u>£1,400,000</u>	<u>1,000,000 shares</u>

After issue

Sundry Net Assets	<u>£2,200,000</u>	Shares now have a Balance Sheet value of £1.66
Capital—Ordinary		
Shares of £1	1,320,000	
Retained Profits	400,000	<u>£2,200,000</u>
Share Premium	480,000	<u>1,320,000 shares</u>
320,000 @ £1.50		
	<u>£2,200,000</u>	

The value after issue will depend on the market movements in view of increase in supply. The effect on dividends will be:

Assume 15% of £1,000,000	=	150,000
15% of £1,320,000	=	198,000
Additional profits required		<u>£48,000</u>

representing a return of 6% on the additional capital raised of £800,000. If this is in line with present return the market price may well remain steady.

As compared with a bonus issue the additional shares represent additional funds for the company which should be utilised in the most profitable manner.

The price of a capital issue may be calculated on the basis of anticipated dividend as follows:

Balance Sheet

Fixed Assets	2,640,000	The shares have a Balance Sheet value of:
Current Assets	<u>480,000</u>	
	<u>£3,120,000</u>	
		<u>£3,720,000</u> = £1.30 2,400,000
Ordinary Shares of £1	2,400,000	The company intends to raise £600,000 either by a public issue or a rights issue on a 1 for 5 basis. A dividend of £540,000 will be paid on the total capital after the issue. The market expects a return of 12%.
Reserves	720,000	
	<u>£3,120,000</u>	

The anticipated dividend represents a return of 18%:

$$\frac{£540,000 \times 100}{3,000,000}$$

It has been assumed that the issue is at par. The value of the share is

$$\text{Nominal value} \times \frac{\text{Actual Rate}}{\text{Market Rate}} = \text{£1} \times \frac{18}{12} = \text{£1.50}$$

The price of the rights issue would be:

$$\text{Capital required} \quad \frac{\text{£600,000}}{480,000} = \text{£1.25}$$

Shares to be issued
($\frac{1}{2}$ of 2,400,000)

The price of the rights letter would be:

Cost of 500 shares at market price £1.50	750
Cost of 100 shares at issue price £1.25	125
Cost of 600 shares	<u>£875</u>
Cost of one share	£1.458
Market price	1.500
Rights price	<u>0.042</u>

The market price of the shares after the rights issue would be:

$$\frac{\text{Market Value of Dividend}}{\text{Shares in issue}} = \frac{540,000}{12} \times \frac{100}{2,880,000} = \text{£1.56}$$

The Balance Sheet after rights issue is:

Fixed Assets	2,640,000
Current Assets	1,080,000
	<u>£3,720,000</u>

Ordinary Shares of £1	2,880,000
Shares premium	120,000
Retained profits	720,000
	<u>£3,720,000</u>

The shares have a Balance Sheet value of

$$\frac{\text{£3,720,000}}{2,880,000} = \text{£1.29}$$

The holder of 6,000 shares wishing to invest £1,500 irrespective of manner of issue would then have a holding valued at:

		<i>General Issue</i>			<i>Rights Issue</i>
		Shares	Cost		
Original holding at £1		6,000	6,000		6,000
New Issue @ £1.50		1,000	1,500	New Issue @ 1.25	1,200
		<u>7,000</u>	<u>£7,500</u>		<u>7,200</u>
					<u>£7,500</u>
Value per share		£1.07			£1.04

The reduction in value per share is offset by increased holding. The value will also be affected by market movements on a supply and demand basis.

The above calculation should be compared with the effect on share value after a bonus issue.

Table 8.2 illustrates the prices at which a number of leading companies issued capital under a rights issue at a time when it was considered that, due to the state of the money market, a public issue may not have been successful.

TABLE 8.2

<i>Industry</i>	<i>Capital raised</i>	<i>Issue basis</i>	<i>Issue price</i>	<i>Market price</i>	<i>Change on day</i>	<i>Rights price per share</i>	<i>Anticipated dividend per share</i>
	£m.				P	P	P
Mining	35.5	1 for 8	£1.25	£1.57	- 7	3.5	5.6
Insurance	31.6	1 for 4	1.30	1.73	+ 5	8.6	7.75
Electrical	15	1 for 4	80p	1.05	- 11	5	3.9
Dairy Farmers	12.5	1 for 5	39p	48½	N/C	1.6	—
Chemicals	6.8	1 for 5	90p	1.06	- 8	2.66	5.5
House builders	2.8	1 for 3	60p	92	+ 8½	8	6
Chemicals	2.7	1 for 3	88p	1.25	+ 6	9.25	7

Share valuations

Promoters and brokers have attempted to price shares when making capital issues by taking into account future prospects of the company, the state of the money market and the type of business.

Investors, however, apart from buying shares at the time of issue, may wish at some later date to purchase sufficient shares to obtain a controlling interest and such persons will be concerned with the state of the assets, the profit-earning capacity of the business and the alternative uses to which such assets might be put or the necessity for replacement giving rise to additional depreciation charges thus reducing profit.

In the simplest form, shares can be valued on the basis that if all assets are disposed of and liabilities paid off the remaining funds will be distributed among the ordinary shareholders.

This method, known as the 'Assets Basis' (Balance Sheet Valuation), acknowledges that any undistributed profits are represented by assets owned by the ordinary shareholders.

Balance Sheet

Fixed Assets	3,200,000
Current Assets	<u>2,600,000</u>
	5,800,000
Less Current Liabilities	<u>1,300,000</u>
	<u>£4,500,000</u>
£1 Ordinary Shares	1,800,000
6% Preference Shares	1,700,000
Retained Profits	540,000
8% Debentures	<u>460,000</u>
	<u>£4,500,000</u>

If assets are sold at Balance Sheet valuations proceeds are 4,500,000 from which would be deducted amounts due to Debenture Holders 460,000 Preference Shareholders 1,700,000 2,160,000 Leaving £2,340,000 available for ordinary shareholders to give a valuation of $\frac{£2,340,000}{1,800,000}$ shares = £1.30

Such a valuation is, however, unlikely to arise due to the historical nature of the Balance Sheet and the valuer requiring an up-to-the-minute situation. The above example serves to illustrate the point that ordinary shareholders consider that surplus assets reflect the growth of their shares through undistributed profits and they require compensation when an offer is made for their shares.

The sellers of a business will attempt to put the business in the best possible situation and therefore revalue the assets according to current market prices. The position is then as follows:

Fixed Assets as revalued	4,460,000
Current Assets as revalued	<u>2,420,000</u>
	6,880,000
Less Debenture Holders	460,000
Current Liabilities	1,300,000
Preference Shareholders	<u>1,700,000</u>
	<u>3,460,000</u>
Leaving	<u>£3,420,000</u>

This gives a valuation of $\frac{£3,420,000}{1,800,000}$ shares = £1.90 The price at which the business is bought and sold then becomes a matter for discussion between the parties. The valuation of shares is basically a discussion of opinions, each party attempting to obtain the best bargain.

Normal market dealings involve the deduction or addition of a quarter of the difference between two prices, as follows:

Buyer is offering	1.30	
Seller hopes to obtain	<u>1.90</u>	
Difference		60¼ = 15p
Buyer may lift price to	1.45	
Seller may reduce price	<u>1.75</u>	
Difference		30¼ = 7.5p
Buyer may lift price to	1.52	
Seller may reduce price to	<u>1.67</u>	
Difference		15¼ = 4p
Buyer now offers	1.56	
Seller now offers	<u>1.63</u>	
Bargain probably struck at	£1.60	

Where assets are, due to economic use, extremely profitable the seller may attempt to obtain a price on the basis of profits representing a return on capital, and such profits represent a dividend at a given rate or for a specified number of years.

This method is referred to as the 'Profit Basis' and acknowledges that an investor is aware of the return he is expecting on his capital or the number of years he expects to work before seeing capital repaid.

If profits in a particular financial period are £496,800 and this is a 12% return on capital, the capital value is calculated as

$$\frac{\pounds 496,800 \times 100}{12} = \pounds 4,140,000$$

giving a value per share of:

$$\frac{\pounds 4,140,000}{1,800,000 \text{ shares}} = \pounds 2.30$$

The purchaser, however, will wish to examine the Profit and Loss Account to discover any omissions or extraordinary charges or credits not likely to arise if he purchases, e.g. income from investments, write-offs in respect of obsolete stock, additional depreciation arising from replacement of fixed assets, economies arising from elimination of expenses.

Changes in profit levels will also have an effect on taxation charges and amounts available for dividends.

The valuation may also be attempted on the basis of the average profit for a given number of years. This may ignore fluctuations leading to an average which has no relationship to normal profit.

A share price may also be calculated by reference to the dividend paid as a percentage of the market price of the share.

This method is referred to as the 'Dividend Yield' and acknowledges that an investor may be satisfied with a lower rate of return, or is anticipating a higher rate than is paid by the company.

A company whose shares have a nominal value of £1 pays a dividend of 15%. The market value is £1.25. The dividend represents a return of 12%

$$\frac{15 \times 100}{125}$$

alternatively the price to be paid may be calculated by considering the expected income on the nominal value with the actual income:

Nominal value	£1	Actual dividend	15%
		Expected dividend	20%
$\frac{15 \times 100}{20} =$	75p	The price the investor would pay.	

If actual dividend is 25% and expected dividend is 20% price would be:

$$\frac{25 \times 100}{20} = \text{£}1.25$$

This method is useful when attempting to compare the market price of a number of shares of differing nominal values. For example,

N.V. 50p Dividend 10% M.V. 80p Yield $\frac{5p \times 100}{80p} = 6\frac{1}{4}\%$

N.V. £1 Dividend 18% M.V. 1.90 Yield $\frac{18p \times 100}{190p} = 9\frac{1}{2}\%$

N.V. 25p Dividend 20% M.V. 30p Yield $\frac{5p \times 100}{30p} = 16\frac{2}{3}\%$

The profit earned per share may also be used to determine the period required to obtain the return of the capital by ascertaining the extent to which the market price exceeds the earnings. This method, Price/Earnings Ratio, acknowledges that investors realise that capital may only be recovered after a given period and each investor is aware of the period he is prepared to wait. For example,

Earnings 10p	M.V. 75p	P/E Ratio 7½
Earnings 25p	M.V. £3.00	P/E ratio 12
Earnings 30p	M.V. £6.00	P/E ratio 20

Investors in these companies, paying present market prices and on the basis of present earnings, will appreciate that they will not obtain return of their capital for 7½, 12 and 20 years, respectively.

Conversely, an investor knowing the period he requires will convert the earnings accordingly. For example,

Earnings 10p	P/E ratio required 6	∴ Price 60p
Earnings 25p	P/E ratio required 10	∴ Price 2.50
Earnings 30p	P/E ratio required 15	∴ Price 4.50

Negotiation will now take place on the basis of buying price 60p and selling price 75p: £2.50 and £3.00, £4.50 and £6.

The above methods have operated for the valuation of shares in public companies where there is no restriction on transfers and the market dealings give an indication of a price.

In the case of the purchase of shares in private companies the following considerations must be borne in mind:

Assets – Lack of capital may have prevented replacement; considerable expenditure may be necessary.

Profits – May be affected by the absence of salaries taken by way of dividends.

Dividends – May have been affected by the necessity to retain funds. Owners of a private company may take dividends by way of salary.

Price/Earnings – Is not applicable due to lack of market – any comparison with comparable public companies is artificial due to dissimilar size of businesses and the absence of the market attempting to fix prices.

In addition the Articles of Association may contain restriction as to the method of buying and selling; for example, they may require the purchase of a minimum quantity or sanction of remaining members.

Factors affecting share price

- (1) Necessity to sell, executor obtaining funds – price falls.
- (2) Extent to which buyer attempting to obtain control – price rises.
- (3) Capital gearing, extent of fixed charges depressing dividend – price falls.
- (4) Profit to capital employed; is this in line with similar businesses?
- (5) Extent of fluctuations in profits.
- (6) Valuation of fixed assets, if giving rise to increase – price rises.
- (7) State of business generally, i.e. stock and debtor valuation – adequate reserves.
- (8) Proportion of capital being purchased (large holding has more bargaining power compared to smaller holding) – price rises.
- (9) Rate of dividend compared to anticipated rate and rate for industry.
- (10) Type of trade, if speculative – price falls.
- (11) Dividend policy in relation to profits, if conservative – price falls.

The following case gives an indication of the problems involved in attempting a share valuation.

Balance Sheet

£000's	
Land and Buildings	45
Plant and Machinery	783
Investments	438
Current Assets	
Stocks	3,055
Debtors	1,698
Bank	1,111
	<u>£5,864</u>
Current Liabilities	
Creditors	2,934
Proposed Dividend	24
Bank Overdraft	957
	<u>£3,915</u>
	1,949
	<u>£3,215</u>
Ordinary Shares of £1	698
6½% Preference Shares of £1	139
Retained Profits	1,652
	2,489
Taxation	564
Insurance Premiums	162
	<u>£3,215</u>

Company had maintained a dividend of 5% for 20 years. Profits after tax for past five years:

Yr. 1	97,000
2	103,000
3	62,000
4	27,000
5	58,000

Prices offered or quoted

Buyer	Seller
56¼	£1
62½	£3
75	£1.70
80	£1.40
88	£1.20

Final price

1.20

88

Margin 32 ¼ = 8
Result 88 + 8 = 96p

On Balance Sheet ordinary shares were worth

3,215,000

Less Preference Capital

139,000

£3,076,000 = £4.40 approx.

698,000

If a further deduction is made for taxation and insurance the value is:

$$3,076,000 - 726,000 = \frac{2,350,000}{698,000} = £3.36$$

The following views were expressed during negotiations over price:

<i>Buyer</i>	<i>Seller</i>
Trade extremely risky.	
Current asset position not satisfactory.	
Stocks excessive.	Assets profitably employed.
Overdraft at too high a level.	Not worried by size of overdraft –
Profits result of inflation and were abnormal.	a healthy sign of asset management.
If prices fell stocks were at risk.	Prices would not fall.
Company was a family business, buyer might have difficulty in reselling.	If company was going public, purchaser would not be restricted.
Able to purchase less than 10% – little possibility of getting control.	Buyers were depressing price on fears of speculation if company went public.
Capital replacement costs excessive.	At £1.20 would buy every share available if this was view of previous valuer.

As a result of discussions the price of the shares was finally agreed at 95p each. Business was a family concern, they did not want to lose control. Share could only be transferred to non-members at a fair valuation.

You are required to place a value on the shares.

Balance Sheet

Fixed Assets	300,000	Fixed Assets purchased 3 years
Net Current Assets	600,000	previously are valued at cost less
	<u>£900,000</u>	depreciation amounting to £100,000 p.a.
Share Capital of £1	100,000	Current market value £1,050,000.
Reserves	800,000	Scrap value in 5 years 50,000.
	<u>£900,000</u>	Cost of replacement will then be
		£1,200,000.

Your client takes a salary of £6,000 p.a. and a dividend of £300,000 p.a. which was the profit for each of the past 3 years. A replacement as manager will require £9,000 p.a. Investors normally expect a dividend yield of 10%.

Assets per Balance Sheet		900,000
Add profit on revaluation of fixed assets (£1,050,000 - 300,000)		<u>750,000</u>
		1,650,000
Add premium in respect of actual earnings compared with anticipated earnings.		
Actual dividend	£300,000	
Anticipated dividend 10% on £900,000	<u>90,000</u>	
	210,000	
for say 3 years		<u>630,000</u>
		<u>£2,280,000</u>
Ordinary Shares		100,000
Value per share		£22.80
Assets after replacement		1,800,000
Add sum in respect of actual earnings exceeding anticipated earnings.		
Present profit before salary and depreciation (300,000 + 100,000 + 6,000)	406,000	
Less future salary and depreciation (Depn., (say), 150,000 + 9000)	<u>159,000</u>	
	247,000	
Anticipated income 10% on 1,800,000	<u>180,000</u>	
	67,000	
for say, 3 years		<u>201,000</u>
		<u>£2,001,000</u>
	Ordinary Shares	100,000
	Value per share	£20.01

Seller is saying assets should be revalued but this does not involve buyer in any additional funds – he only expects a return on cost of assets. Present income is profit after charges.

Buyer considers he has to find funds for replacement, which affects his anticipated return. Profit accruing to him by way of dividend will be reduced by virtue of increased depreciation. (Cost £1,200,000 over estimated life of 8 years – present assets 3 years old, have 5 years to run.)

Profits at present time:

Dividend	300,000	
Depreciation	100,000	
Salary	<u>6,000</u>	406,000
Less future charges		
Depreciation		
(300,000 - 50,000 ÷ 5 years)	50,000	
Salary	<u>9,000</u>	59,000
Profits available as dividend		<u>£347,000</u>
Representing 10% return		
Capital value is		3,470,000
Value per share		£34.70
Profits after replacement		
Present profits before depreciation and salary		406,000
Less future depreciation		
(£1,200,000 ÷ 8 years)	150,000	
Salary	<u>9,000</u>	159,000
Profits available as dividend		<u>£247,000</u>
Capital value @ 10%		£2,470,000
Value per share		£24.70

Seller argues that future profits not affected by revaluation – there are no capital costs to be written off. Future profits will be increased by virtue of reduced depreciation.

Buyer argues that at point in time when assets replaced an increased depreciation charge will arise in addition to increased executive charges. Even if depreciation calculated on revaluation figure this will bring profit to £197,000 (£1,050,000 - £50,000 ÷ 5 years = £200,000 p.a.) or if written off over 8 years will give £125,000 p.a. for a profit £272,000 (share value £27.20).

Comparative figures, therefore, are:

	<i>Seller</i>	<i>Buyer</i>
Minimum	22.80	20.01
Maximum	34.70	27.20

Final price probably in the region of £24.

Questions

8.1 The Balance Sheets of two companies are as follows:

	<i>ABC Ltd</i>	<i>XYZ Ltd</i>
3% Redeemable Preference		
Shares of £1	500,000	500,000
Ordinary Shares of 50p	280,000	280,000
Retained Profits	306,000	566,000
Creditors	114,000	14,000
	<u>£1,200,000</u>	<u>£1,360,000</u>
Fixed Assets	429,000	750,000
Current Assets	461,000	280,000
Bank	310,000	330,000
	<u>£1,200,000</u>	<u>£1,360,000</u>

The Preference Shares are redeemable by both companies at a premium of 10%.

ABC Ltd decides to make an issue of 50p Ordinary Shares, at a price of 55p, sufficient to cover the cost of repaying the Preference Shares.

XYZ Ltd raised an issue of 10% Debentures (secured on the Fixed Assets) at a price of 98p.

Both companies subsequently made a bonus issue on a 1 for 4 basis.

In the previous two years both companies had paid an Ordinary Dividend of 12½% after meeting Preference Share dividends.

You are required to show the Balance Sheets of both companies on completion of all the above transactions, and to comment on the merits or otherwise of both schemes.

8.2 The 'capital and reserves' section of the published Balance Sheet of Eagle Boatbuilders Ltd, as at 31 December, 19–2 was as follows:

Authorised Capital		
5,000,000 Ordinary Shares of £1 each		<u>£5,000,000</u>
Issued Capital		
2,000,000 Ordinary Shares of £1 each fully paid		2,000,000
Reserves		
Capital Reserve	1,500,000	
Capital Redemption Reserve Fund	500,000	
Share Premium	200,000	
Retained Profits	<u>50,000</u>	<u>2,250,000</u>
		<u>£4,250,000</u>

The directors are anxious to increase the company's funds by £500,000 during 19–3. During the year, the company earns a profit of £400,000 (after providing £100,000 for depreciation). There have been no other sources and no applications of funds during the year, but the usual dividend of 20% has not been paid. As at 31 December 19–3, the Directors are considering the following changes in the company's capital:

either

(a) a rights issue on the basis of one share for each five already held at a premium of 25p

or

(b) a bonus issue on the basis of one share for each four already held.

Required:

- (a) Pro-forma Balance Sheet (capital and reserve section only) as at 31 December, 19–3 for each of the two alternatives, i.e. after making (i) the rights issue, (ii) the bonus issue.
- (b) The maximum dividend the directors could declare in each case if their objective of increasing the company's funds by £500,000 is to be achieved. Explain how you calculate the maximum dividend in each case.

8.3 Fashion Ltd is a private company controlled by Smith, who is considering selling his interest in the firm. The summarised Balance Sheet of the firm at 31 December was as follows:

Fixed Assets	11,000
Current Assets	<u>13,500</u>
	24,500
Less Current Liabilities	<u>5,500</u>
	<u><u>£19,000</u></u>
£1 Ordinary Shares	10,000
Reserves	4,000
Profit and Loss a/c	<u>5,000</u>
	<u><u>£19,000</u></u>

The company normally earned £3,000 per annum and paid a dividend amounting to £500. Smith had arranged that the business be professionally valued and the results showed the Current Assets to be worth £10,000 while the Fixed Assets were worth £17,500. However, these were under conditions of a forced sale for liquidation.

Smith also knew that similar private companies gave a yield of 10% on earnings, while the quoted public companies in the same field have a dividend yield of 4%.

Required:

- (a) To value an ordinary share on (i) liquidation or break-up basis, (ii) dividend yield basis, (iii) earnings yield basis.
- (b) To comment briefly on the limitations of the valuations you have calculated.

8.4 Explain the methods you would use when asked by a client to advise him on the price at which he should acquire a substantial holding of ordinary shares in the following private company. What are the limitations to the methods you have used?

		£000's
Freehold land and Buildings, at cost		74
Plant and Machinery, at cost	102	
Less depreciation	<u>30</u>	72
Current Assets		
Stocks	202	
Debtors	354	
Bank	84	
	<u>640</u>	
Current Liabilities		
Creditors	362	
Taxation	76	
Proposed Dividends	<u>24</u>	<u>178</u>
		<u>324</u>
8% Preference Shares of £1	60	
Ordinary Shares of £1	120	
Reserves	84	
10% Debentures (secured)	<u>60</u>	<u>324</u>

Profits for the past three years, after tax and debenture interest but before dividends, have been £68,000, £76,000 and £35,400.

The freeholds are currently valued at £157,000. Plant is of a specialist nature with a value of only £25,000.

Public companies in the same trade as the above private company have a price/earnings ratio of 12 and a dividend yield of 10%.

CHAPTER 9

Reconstructions, Amalgamations and Consolidations of Company Accounts

Reconstructions

The situation may arise where a limited company wishes to reconstruct its capital in order to bring this into line with its assets position. The reasons for a reconstruction could include:

(1) The company has suffered substantial losses of funds either through poor trading conditions, failure of investments, losses of fixed assets such as a substantial fall in value below the cost of property, or the seizure of company assets by a foreign government.

(2) The capital gearing has become unsuitable for the profit-earning capacity of the company, such as a company having a high proportion of fixed interest capital or loan stock, the interest on which is greater than its ability to earn profits.

(3) To simplify the capital structure by reducing the number of classes of shareholder.

The procedure to carry out a reconstruction is governed by law. The accounting principles are given in Table 9.1.

Table 9.1 Accounting principles for a reconstruction

Where revaluation of assets takes place, transfer the losses to a reconstruction account.	Dr. Reconstruction account Cr. Sundry Net Assets	Amount by which the assets are to be written down
Where there are accumulated losses on the Profit and Loss Account to be eliminated transfer these to the reconstruction account.	Dr. Reconstruction account Cr. Profit and Loss account and reserves	Amount of losses being borne by shareholders

Where reconstruction costs or old formation expenses are being written off, transfer the amounts to the reconstruction account.	Dr. Reconstruction account Cr. Reconstruction expense account Cr. Formation expense account.	Losses to be borne
Where shares/debentures are to be converted into other shares	Dr. Share or Debenture account Cr. Reconstruction account Dr. Reconstruction account Cr. Share Capital	Cancellation of old capital, creation of new capital

Although these adjustments will affect the Balance Sheet figures the market value of the shares may not be affected because the market value is determined by economic conditions, comparative rates of investment return and asset values on disposal of the business. For example, prior to the reconstruction a share at a nominal value of £1 may have had a market value of £0.10. The result of a reconstruction will be to reduce the nominal value to a figure nearer the market value.

Law Relating to Reductions and Reconstructions

The main sections of the Companies Act relating to this are Section 66–72 inclusive, the main points of which can be summarised as follows:

(1) A company may reduce its share capital provided the Articles of Association allow it. A special resolution has to be passed (21 days' notice; $\frac{3}{4}$ majority) and the Court must approve the scheme.

(2) Where the reconstruction involves the reduction of the uncalled amount on shares or the repayment of capital to shareholders, every creditor, as listed by the Court, may raise objections to the scheme. It is an offence to withhold the name of a creditor from the Court.

(3) If the Court so decide, the words 'and reduced' may be added to the company's name.

(4) The Registrar of Companies must be given copies of the minutes and the assent of the Court concerning the scheme.

(5) Where the rights of several classes of shares are to be changed separate meetings must be held for each class. More than 15% of the shareholding may raise objections with the Court if they did not vote in favour of the resolution.

Section 206. Majority of creditors representing $\frac{3}{4}$ in value or a class of members can agree to a scheme of reconstruction and if the Court gives sanction to the scheme it is binding on all creditors and members.

Section 207. Effect of compromise to be notified to all creditors, members and debenture holders.

<i>Motor Vehicles</i>	
Balance	6,000
	<u>£6,000</u>
Recon- struction Balance	1,000 5,000
	<u>£6,000</u>
Balance	5,000

<i>Cumulative Preference Shares</i>	
Recon- struction	£250,000
Bal.	<u>£250,000</u>

<i>Ordinary Shares</i>	
Reconstruction	Bal. £150,000
<u>£150,000</u>	

<i>Investments</i>	
Balance	£35,000
	<u>£35,000</u>
Reconstruction	
	<u>£35,000</u>

<i>Profit and Loss Account</i>	
Bal.	39,000
	<u>£39,000</u>
Reconstruction	
	<u>£39,000</u>

<i>Fixtures and Fittings</i>	
Balance	8,000

<i>Ordinary Share Capital</i>	
	Reconstruction 155,000

<i>Net Current Assets</i>	
Bal.	12,000

The Reconstructed Balance Sheet

Freehold Property	130,000
Fixtures and Fittings	8,000
Motor Vehicles	5,000
Net Current Assets	12,000
	<u>£155,000</u>
Ordinary Share Capital	<u>£155,000</u>

Prior to reconstruction the market value of the ordinary shares may have been 20p and 80p for the preference shares in view of their greater dividend security and capital repayment.

Under the reconstruction the preference shareholders valued the ordinary shares at 50p whilst the ordinary shareholders accepted a valuation of 20p.

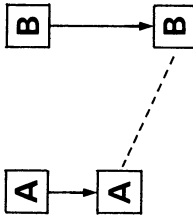
After reconstruction the shares have a Balance Sheet value of £1. Market value may well be approximately the same.

An ordinary shareholder who had 5,000 old shares valued at 20p (£1,000) now has a holding of 1,000 new shares valued at £1 (£1,000).

The value of the ordinary shareholding has remained the same, because the book value of the assets has been brought into line with their market value.

Various Methods of Company Takeovers and Amalgamations

Method I



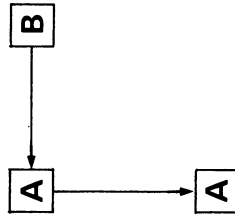
A takes over B by exchange of shares and/or cash. The investment will appear on the Balance Sheet of A at cost. B remains a company but controlled by A. Result: B is a subsidiary of A. They remain two separate legal entities but the shareholders of A control both companies.

Accounting

A's books: Dr. Investment in subsidiary
Cr. Share Capital/
Cash
Amount exchanged to acquire the shares in B

B's books: No accounting entries will be necessary but the register of shareholders will be amended. Two members only replacing previous members.

Method II



A takes over B by exchange of shares. The assets of B are transferred to A and B is wound-up. Result: A becomes a larger business unit and there is only one legal entity (Companies Acts S.206-8 and 287 apply).

A's books: Dr. Asset account
Cr. B Ltd
Value of net assets assumed by A Ltd

Dr B Ltd
Cr. Share Capital/
Cash
Share Premium
Nominal value and premium if any of shares, and cash paid to B's shareholders

Dr./Cr. Goodwill/
Capital Reserve
Cr./Dr. B Ltd
Difference between the value of net assets assumed and the purchase consideration

B's books: Dr. Realisation a/c
Cr./Dr. Assets/
Liabilities
Book value of net assets being taken over.

Dr. A Ltd a/c
Cr. Realisation a/c
Dr. Reserves
Cr. Share Capital
Agreed purchase price
The undistributed profits of B Ltd

Dr./Cr. Realisation } The profit/loss on the
a/c } realisation of B Ltd which
Cr./Dr. Share } has been calculated
Capital } through the realisation a/c

Dr. Share Capital } The assets received in
Cr. A Ltd a/c } settlement of the purchase
price. The assets are
distributed to the share-
holders in an agreed
proportion

The shareholders of B Ltd will gain either a profit or suffer a loss. A Ltd may create either Goodwill or a capital reserve, depending on their valuation of the assets acquired.

The accounting treatment is exactly the same as Method II except that both A and B are wound up and C is created.

Where variations in the rights of creditors or debenture holders are to be changed, approval of ¾ of each class in value is necessary together with Court sanction (Companies Acts S.206-8).

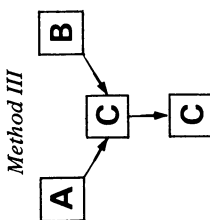
The accounting treatment is similar to Method I except that C is created by share exchanges with both A and B. The Balance Sheet of C would show investments in subsidiaries A and B equal to C's capital.

The reasons for the creation of a holding company are:-
(a) administrative convenience; (b) cost savings when taking over or amalgamating other firms - there is no expensive winding up to be carried out as in Method III; (c) retaining legal identity and company name; (d) government financial support; (e) to raise extra finance by 'going public'.

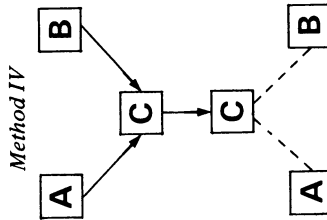
The value of the shares being acquired by C will be arrived at by negotiation and so will the manner in which that value is to be settled, e.g. ordinary shares, preference shares, debentures, etc.

A and B form a new company, C, which acquires all the net assets of A and B in exchange for shares. A and B are wound up.

Result: There is a new business unit, C, created from the old firms A and B. The shareholders of C are the former shareholders of A and B.



A and B form a new company C, which exchanges its shares for those in A and B. A and B are not wound up. Result: C controls A and B and together they form a group of companies. C is known as a 'holding company'.



Amalgamations

The occasion may arise where a company wishes to form an alliance with another company: (a) to gain advantages from economies of scale, e.g. bulk buying; (b) to gain control of the source of supply or outlets for their products; (c) to diversify their operations; (d) to acquire additional working capital by acquiring a firm which has surplus funds; (e) to utilise surplus funds by acquiring a firm where the asset values are more than the total market value of the shares; (f) by government or economic pressure to fight off competition, e.g. government creations such as ICL or the GEC – English Electric merger.

Although these reasons may be sound practice for the absorbing company, much time and effort may be expended by both firms fighting the merger. The costs of the fight may exhaust both company's funds so that they have great difficulty in surviving; for example, Lines Brothers.

It must be emphasised that reconstructions take place through the books of both companies. In attempting problems of reconstructions and amalgamations, each set of books should be written up as a separate exercise. Confusion will arise if an attempt is made to close both sets of books simultaneously. No consideration should be given in the books of the selling organisation (vendor) to the values placed on the assets by the purchasing company.

Balance Sheet

	A	B
Fixed Assets		
Land and Buildings	3,000	—
Fixtures and Fittings	2,000	1,000
Vehicles	300	1,500
	5,300	2,500
Current Assets		
Stock	3,000	5,000
Debtors	2,000	1,500
Cash	1,500	2,000
	6,500	8,500
Creditors	3,000	2,000
	3,500	6,500
	£8,800	£9,000
Share Capital	9,000	2,000
Reserves	(200)	7,000
	£8,800	£9,000

The price for the companies was negotiated at A £15,800 and B £7,900 and was to be settled by the issue of £1 ordinary shares at par.

C valued the assets and liabilities taken over:

	A	B
Land and Buildings	10,000	—
Fixtures and Fittings	1,000	1,200
Vehicles	800	1,000
Stock	3,500	2,000
Debtors	2,000	1,200
Creditors	(2,900)	(2,500)
	<u>£14,400</u>	<u>£2,900</u>
 A and B		 17,300
Cash A		1,500
Cash B		2,000
		<u>£20,800</u>

Books of A Ltd

<i>Realisation Account</i>	
Land	3,000
Fixtures	2,000
Vehicles	300
Stock	3,000
Debtors	2,000
Cash	1,500
Profit to Shareholders	7,000
	<u>£18,800</u>
Creditors	3,000
Purchase Price	15,800
C Ltd	15,800
	<u>£18,800</u>

<i>C Ltd</i>	
Realisation a/c	£15,800
Ord. Shares C Ltd	£15,800
	<u>£15,800</u>

Share Capital

Reserves	200
£1 Ord. Shares	
C Ltd	15,800
	<u>£16,000</u>
Bal.	9,000
Profit on Realisation	7,000
	<u>£16,000</u>

Books of B Ltd

<i>Realisation Account</i>	
Fixtures	1,000
Vehicles	1,500
Stock	5,000
Debtors	1,500
Cash	2,000
	<u>£11,000</u>
Creditors	2,000
Purchase Price	7,900
C Ltd	7,900
Loss to Shareholders	1,100
	<u>£11,000</u>

<i>C Ltd</i>	
Realisation a/c	£7,900
Ord. Shares C Ltd	£7,900
	<u>£7,900</u>

Share Capital

	Bal. 2,000
Loss on Realisation 1,100	Reserves 7,000
Ord. Shares C. Ltd 7,900	
<u>£9,000</u>	<u>£9,000</u>

Books of C Ltd

<i>A Ltd</i>			<i>B Ltd</i>		
Ord. Shares	15,800	Land 10,000	Ord. Shares	7,900	Fixtures 1,200
Creditors	2,900	Fixtures	Creditors	2,500	Vehicles 1,000
Capital Reserve	100	Vehicles			Stock 2,000
		Stock			Debtors 1,200
		Debtors			Cash 2,000
		Cash			Goodwill 3,000
	<u>£18,800</u>	<u>£18,800</u>		<u>£10,400</u>	<u>£10,400</u>

*Balance Sheet C Ltd
(After Amalgamation)*

Fixed Assets			
Land and Buildings			10,000
Fixtures and Fittings	(A 1,000 + B 1,200)		2,200
Vehicles	(A 800 + B 1,000)		1,800
Goodwill	(A-100 + B 3,000)		2,900
			<u>16,900</u>
Current Assets			
Stock	(A 3,500 + B 2,000)	5,500	
Debtors	(A 2,000 + B 1,200)	3,200	
Cash	(A 1,500 + B 2,000)	3,500	
		<u>12,200</u>	
Creditors	(A 2,900 + B 2,500)	5,400	
			<u>6,800</u>
			<u>£23,700</u>
£1 Ordinary Shares			<u>£23,700</u>

In the books of A Ltd and B Ltd the book values of the assets and liabilities are used to arrive at a profit for A and a loss for B, while in the books of C Ltd the *valuation* of the assets and liabilities is used. This, compared with the price, gives rise to a capital reserve on A and goodwill on B, these having been set off against each other to produce a goodwill figure of £2,900.

(5) The authorised capital was to be £150,000 in ordinary shares and the remaining shares after the above were to be issued for cash to the public.

(6) Y Ltd valued the Fixed Assets at £100,000, while the current assets were valued at their Balance Sheet figure.

The loss borne by ordinary shareholders can be calculated prior to preparation of the accounts, i.e.

Capital Shares	120,000
Accepted (1 for 3)	40,000
Loss	£80,000

Working Paper

Purchase consideration calculation

<i>In Y Ltd</i>	<i>8% Debentures</i>	<i>Ord. Shares</i>	<i>Cash</i>	<i>Total</i>
X Ltd 6% Debentures	30,000			
re Interest Creditors	—	3,000	—	33,000
Prof. Sl re Dividend	—	36,000	47,000	83,000
Ordinary Shareholders		22,500		
		3,000	—	25,500
		40,000	—	40,000
	£30,000	£104,500	£47,000	181,500
Authorised Capital		150,000		
Cash received on issue		£45,500		
Value of Fixed Assets			100,000	
Current Assets			57,500	
				157,500
Goodwill				£24,000

X Ltd Books

<i>Realisation</i>			
Fixed Assets	137,000	Y Ltd	181,500
Goodwill	25,000		
Stock	31,000		
Debtors	24,550		
Bank	1,950		
5% Debentures	1,500	Loss to Ordinary Shareholders	51,000
6% Pref.	500		
Creditors	11,000		
	£232,500		£232,500

<i>Y Ltd</i>	
Realisation	181,500
Debentures	33,000
Ordinary shares	25,500
Creditors	83,000
Ordinary Shares	40,000
	£181,500

Ordinary Share Capital

Ordinary Shares	40,000	Balance	120,000
Realisation	51,000		
P and L a/c	29,000		
	<u>£120,000</u>		<u>£120,000</u>

5% Debentures

8% Debentures	30,000	Balance b/d	30,000
Ordinary Shares	3,000	Interest b/d	1,500
		Realisation	1,500
	<u>£33,000</u>		<u>£33,000</u>

Creditors

Y Ltd		Balance	72,000
Cash	47,000	Realisation a/c	11,000
Shares	36,000		
	<u>£83,000</u>		<u>£83,000</u>

6% Preference Capital

Ordinary Shares	25,500	Balance	25,000
		Realisation	500
	<u>£25,500</u>		<u>£25,500</u>

Y Ltd Books

X Ltd

8% Deb.	30,000	Fixed Assets	100,000
Cash	47,000	Stock	31,000
Ord. Shares	104,500	Debtors	24,550
		Bank	1,950
		Goodwill	24,000
	<u>£181,500</u>		<u>£181,500</u>

Ordinary Shares

	X Ltd	104,500
	Cash	45,500

8% Debentures

	X Ltd	30,000
--	-------	--------

Bank

X Ltd Shares	1,950	X Ltd Bal	47,000
	45,500		450
	<u>£47,450</u>		<u>£47,450</u>
Balance	450		

Balance Sheet

Y Ltd

Fixed Assets	100,000
Goodwill	24,000
Stock	31,000
Debtors	24,550
Cash	450
	<u>£180,000</u>
Ordinary Shares	150,000
8% Debentures	30,000
	<u>£180,000</u>

The price to be paid for X Ltd is arrived at by computing the amount each class of the Capital is to receive.

The various interests in X Ltd are prepared to accept the arrangement proposed as they will have the opportunity to participate in future profits and obtain a return which would not have been available before.

The value of the ordinary shares which were issued to the various interested parties varies in accordance with their bargaining powers:

5% Debenture holders value them at	0.50
(3,000 shares for £1,500 interest outstanding)	
Creditors value them at	0.75
(36,000 shares for £72,000 - £45,000 cash)	
6% Preference shareholders value them at Capital	
(22,500 shares for £25,000)	0.90
(3,000 shares for £4,500 dividend)	0.66

The creation of goodwill in Y Ltd arises because the assets are valued by Y Ltd at a lower figure than the price it paid for them.

As a result of the reorganisation the company is in an improved financial state. It now has current assets of £56,000 (previously net liabilities £14,500) on which to base its trading prospects. The future profits will have to bear a fixed charge for Debenture Interest £2,400. The remaining profit will be available for ordinary shareholders.

Consolidations

Where there is a group of companies it is often very difficult for a shareholder to know exactly the size and scope of the firm in which he has invested. If he has invested in a holding company the only assets which the firm will have will be investments. The problem is overcome by preparing a set of accounts for the whole group of companies as if it was one business unit. The assets and liabilities of all companies in the group are shown, together with a breakdown of various interests in the firm, e.g. the major and minority shareholdings.

The preparation and use of consolidated accounts will give no further legal rights to the majority shareholders, minority shareholders in the subsidiary companies or the creditors of the individual companies. Each company of the group retains its separate legal identity. No creditor, for example, has the right to claim against the assets of the group other than those of the company to which credit was advanced.

The consolidated Profit and Loss Account will show the results of the group as a whole, excluding profits arising from trading between companies within the group.

When preparing consolidated accounts there are several particular problem areas:

- (1) The elimination of capital in one company represented by investments in another.
- (2) The division of reserves by the parent company between capital and revenue.

- (3) The establishment of minority interests.
- (4) The elimination of all inter-group indebtedness.
- (5) The transfer of assets between companies in the group, giving rise to inter-company indebtedness.
- (6) Dividends proposed by one company in the group not accounted for by the recipient companies.
- (7) The elimination of unrealised profits on inter-group transactions.

The need for consolidated accounts is enforced by the Companies Acts of 1948 (S. 150) and the 1967 Act. Section 154 of the 1948 Act defines a subsidiary company as one which has another company holding more than half its nominal share capital or controlling the composition of the Board of Directors. A holding company is defined (S. 154) as one which has a subsidiary company (Figure 9.1).

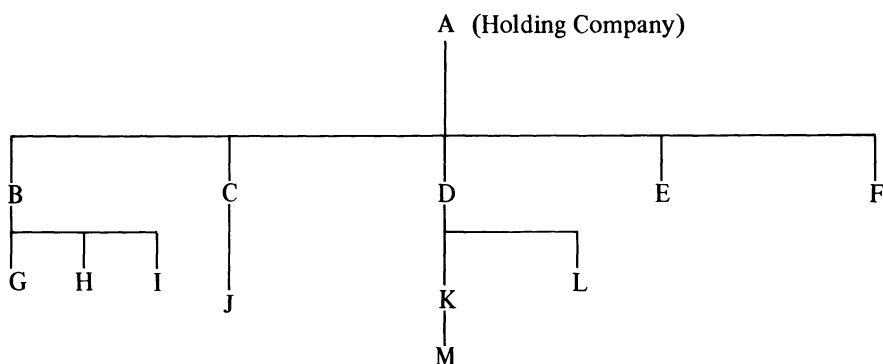


Figure 9.1 A group of companies

Company A is the ultimate parent company but need not be a trading company, having been formed simply to acquire the shareholdings of other companies. This company will have to prepare the ultimate consolidated accounts for the whole group.

Companies B, C, D, E and F are all subsidiaries of A but may also be parent companies of their own group, as in the case of companies B, C and D. They would consolidate their own group accounts and, in turn, that group would be consolidated by A. Companies G, H, I; J; K and L are subsidiaries of B, C and D, respectively, and are sub-subsidiaries of A as this company controls the composition of the boards of B, C and D, who in turn control the boards of their subsidiaries. Company K would consolidate the accounts of M, their subsidiary. The companies G, H, I; J; K and L are associated companies, since they have no direct connection, as are M, E and F. Associated companies are companies within the same group but not having the same parent companies. The consolidated accounts represent the combined results of a number of companies and not any one specific company, the individual companies maintaining their accounts and passing their results to their holding company who then consolidate with their own results.

The Case

Balance Sheets

Notes

A owns 100% of the shares in B
 The cost exactly equalled the nominal value in B

	A	B	Consolidated
Assets	20,000	10,000	30,000
Investmt. in B	10,000	—	—
— cost	<u>£30,000</u>	<u>£10,000</u>	<u>£30,000</u>
Capital Reserves	15,000	10,000	15,000
	15,000	—	15,000
	<u>£30,000</u>	<u>£10,000</u>	<u>£30,000</u>

- (a) The cost of the investments is set against the capital purchased
- (b) The assets are the total assets of the group
- (c) The share capital will always be that of the parent company

A owns 100% of the shares in B
 The cost was greater than the nominal value in B

	A	B	Consolidated
Assets	20,000	5,000	25,000
Investment in B	10,000	—	—
— cost	<u>£30,000</u>	<u>£5,000</u>	<u>£30,000</u>
Capital Reserves	15,000	5,000	15,000
	15,000	—	15,000
	<u>£30,000</u>	<u>£5,000</u>	<u>£30,000</u>

- (d) The cost of control or goodwill is calculated:
 Cost of Investmt. 10,000
 Less Capital Purchased 5,000
 Cost of Control £5,000
- It occurs where the cost of acquisition is greater than the book value of the capital acquired

The Case	Balance Sheets		Notes																								
<p>A owns 100% of the shares in B. The cost was less than the nominal value in B</p>	<p>Assets</p> <p>Investment in B - cost</p> <p>Capital Reserves</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">A</td> <td style="width: 50%; text-align: right;">B</td> </tr> <tr> <td style="text-align: right;">20,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;">10,000</td> <td style="text-align: right;">—</td> </tr> <tr> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>£15,000</u></td> </tr> <tr> <td style="text-align: right;">15,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;">15,000</td> <td style="text-align: right;">—</td> </tr> <tr> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>£15,000</u></td> </tr> <tr> <td style="text-align: right;">Capital Reserve</td> <td style="text-align: right;">5,000</td> </tr> <tr> <td style="text-align: right;"><u>£35,000</u></td> <td style="text-align: right;"><u>£35,000</u></td> </tr> </table>	A	B	20,000	15,000	10,000	—	<u>£30,000</u>	<u>£15,000</u>	15,000	15,000	15,000	—	<u>£30,000</u>	<u>£15,000</u>	Capital Reserve	5,000	<u>£35,000</u>	<u>£35,000</u>	<p>(e) The capital reserve is calculated:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Cost of Investmt.</td> <td style="text-align: right;">10,000</td> </tr> <tr> <td style="text-align: right;">Capital Purchased</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;"><u>Capital Reserve</u></td> <td style="text-align: right;"><u>£(5,000)</u></td> </tr> </table> <p>It occurs where the cost of acquisition is less than the capital acquired</p>	Cost of Investmt.	10,000	Capital Purchased	15,000	<u>Capital Reserve</u>	<u>£(5,000)</u>
A	B																										
20,000	15,000																										
10,000	—																										
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<p>A owns $\frac{2}{3}$ of the share in B The cost was equal to the nominal value</p>	<p>Assets</p> <p>Investment in B - cost</p> <p>Capital Reserves</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: right;">A</td> <td style="width: 50%; text-align: right;">B</td> </tr> <tr> <td style="text-align: right;">20,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;">10,000</td> <td style="text-align: right;">—</td> </tr> <tr> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>£15,000</u></td> </tr> <tr> <td style="text-align: right;">15,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;">15,000</td> <td style="text-align: right;">—</td> </tr> <tr> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>£35,000</u></td> </tr> <tr> <td style="text-align: right;">Minority Interest</td> <td style="text-align: right;">5,000</td> </tr> <tr> <td style="text-align: right;"><u>£35,000</u></td> <td style="text-align: right;"><u>£35,000</u></td> </tr> </table>	A	B	20,000	15,000	10,000	—	<u>£30,000</u>	<u>£15,000</u>	15,000	15,000	15,000	—	<u>£30,000</u>	<u>£35,000</u>	Minority Interest	5,000	<u>£35,000</u>	<u>£35,000</u>	<p>(f) $\frac{1}{3}$ of the shares in B are owned by outside shareholders. The cost of control is nil</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Cost of shares</td> <td style="text-align: right;">10,000</td> </tr> <tr> <td style="text-align: right;">Less $\frac{2}{3}$ capital</td> <td style="text-align: right;">10,000</td> </tr> <tr> <td style="text-align: right;"><u>Capital - minority</u></td> <td style="text-align: right;"><u>£5,000</u></td> </tr> </table> <p>The outside shareholders of B will be known as the minority</p>	Cost of shares	10,000	Less $\frac{2}{3}$ capital	10,000	<u>Capital - minority</u>	<u>£5,000</u>
A	B																										
20,000	15,000																										
10,000	—																										
<u>£30,000</u>	<u>£15,000</u>																										
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Less $\frac{2}{3}$ capital	10,000																										
<u>Capital - minority</u>	<u>£5,000</u>																										

The Case

Balance Sheets

Notes

A owns $\frac{2}{3}$ of B and at the time of acquisition the reserves were £9,000 in B

Assets	A	B	Consolidated
Investment in B	20,000	15,000	35,000
— cost	10,000	—	—
	<u>£30,000</u>	<u>£15,000</u>	<u>£35,000</u>
Capital Reserves	15,000	6,000	15,000
	15,000	9,000	15,000
	<u>£30,000</u>	<u>£15,000</u>	<u>£35,000</u>
		Minority Interest	5,000
			<u>£35,000</u>

(g) The $\frac{1}{3}$ minority are entitled to $\frac{1}{3}$ of the capital and reserves in B
 $\frac{1}{3} \times 6,000 = 2,000$
 $\frac{1}{3} \times 9,000 = 3,000$
£5,000

There is no cost of control as the cost = capital and reserves
 $\frac{2}{3} \times 6,000 = 4,000$
 $\frac{2}{3} \times 9,000 = 6,000$
£10,000

Cost of Investment 10,000

A owns $\frac{1}{2}$ of B and at the date of acquisition the reserves were £9,000

Assets	A	B	Consolidated
Investments in B	20,000	15,000	35,000
— cost	10,000	—	—
	<u>£30,000</u>	<u>£15,000</u>	<u>£37,500</u>
Capital Reserves	15,000	6,000	15,000
	15,000	9,000	15,000
	<u>£30,000</u>	<u>£15,000</u>	<u>£37,500</u>
		Minority Interest	7,500
			<u>£37,500</u>

(h) The minority are entitled to $\frac{1}{2}$ of the capital and reserves in B
 $\frac{1}{2} \times 6,000 = 3,000$
 $\frac{1}{2} \times 9,000 = 4,500$
£7,500

The cost of Control:
 A paid 10,000
 A bought $\frac{1}{2} \times 6,000 = 3,000$
 $\frac{1}{2} \times 9,000 = 4,500$
7,500

Cost of Control £2,500

The Case

Balance Sheets

Notes

A owns 100% of the shares in B
 There were no reserves in B at
 the time of acquisition. B had
 paid £500 to A but A had not
 recorded the receipt of the cash,
 i.e. cash-in-transit

Assets	A	B	Consolidated
Loan to B	15,000	9,500	25,000
Current a/c B	3,000	—	
Investment in B	2,000		
— cost	10,000	(3,000)	
Loan from A		(1,500)	
Current a/c A			Cost of Control 5,000
	<u>£30,000</u>	<u>£5,000</u>	<u>£30,000</u>
Capital	15,000	5,000	15,000
Reserves	15,000	—	15,000
	<u>£30,000</u>	<u>£5,000</u>	<u>£30,000</u>

The loans are set against each
 other as they do not refer to
 outside liabilities of the group
 The cash in transit is an asset
 of the group and must be
 incorporated in to the
 Consolidated Balance Sheet:

Assets	A	15,000
Cash in Transit	500	<u>15,500</u>
B		<u>9,500</u>
		<u>£25,000</u>

Current a/c

A with	1,500
B	<u>(1,500)</u>
Cash in Transit	<u>500</u>

B with A

Cost of Control	10,000
Cost of Investment Capital Purchased	<u>5,000</u>
	<u>£5,000</u>

Notes

Balance Sheets

The Case

<p>A owns 100% of the shares in B At the acquisition the reserves were £3,000 in B Included in the assets of A is stock £4,000 which had been sold by B to A. The stock cost B £3,000</p>	<table border="0"> <tr> <td style="text-align: right;">Assets</td> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">Consolidated</td> </tr> <tr> <td style="text-align: right;">Investments in B – cost</td> <td style="text-align: right;">20,000</td> <td style="text-align: right;">11,000</td> <td style="text-align: right;">30,000</td> </tr> <tr> <td></td> <td style="text-align: right;">10,000</td> <td style="text-align: right;">–</td> <td style="text-align: right;">–</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>11,000</u></td> <td style="text-align: right;"><u>£30,000</u></td> </tr> <tr> <td style="text-align: right;">Capital Reserves</td> <td style="text-align: right;">15,000</td> <td style="text-align: right;">7,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td></td> <td style="text-align: right;">15,000</td> <td style="text-align: right;">4,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>£30,000</u></td> <td style="text-align: right;"><u>£11,000</u></td> <td style="text-align: right;"><u>£30,000</u></td> </tr> </table>	Assets	A	B	Consolidated	Investments in B – cost	20,000	11,000	30,000		10,000	–	–		<u>£30,000</u>	<u>11,000</u>	<u>£30,000</u>	Capital Reserves	15,000	7,000	15,000		15,000	4,000	15,000		<u>£30,000</u>	<u>£11,000</u>	<u>£30,000</u>	<p>It is necessary to eliminate unrealised profits on inter-group trading. The stock must be reduced to the value of cost to that group</p> <table border="0"> <tr> <td style="text-align: right;">Stock value in A</td> <td style="text-align: right;">4,000</td> </tr> <tr> <td style="text-align: right;">Stock cost B</td> <td style="text-align: right;">3,000</td> </tr> <tr> <td style="text-align: right;">Profit</td> <td style="text-align: right;"><u>£1,000</u></td> </tr> </table> <p>The assets and the reserves must be reduced</p> <table border="0"> <tr> <td style="text-align: right;">Assets</td> <td style="text-align: right;">Reserves</td> </tr> <tr> <td style="text-align: right;">A 20,000</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td style="text-align: right;">B 11,000</td> <td style="text-align: right;">1,000</td> </tr> <tr> <td style="text-align: right;">31,000</td> <td style="text-align: right;"><u>16,000</u></td> </tr> <tr> <td style="text-align: right;">Less Profit 1,000</td> <td style="text-align: right;">1,000</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>£30,000</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>£15,000</u></td> </tr> </table> <p>Cost of Control</p> <table border="0"> <tr> <td style="text-align: right;">Cost of Investment</td> <td style="text-align: right;">10,000</td> </tr> <tr> <td style="text-align: right;">Capital</td> <td style="text-align: right;">7,000</td> </tr> <tr> <td style="text-align: right;">Reserve</td> <td style="text-align: right;">3,000</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>10,000</u></td> </tr> <tr> <td></td> <td style="text-align: right;">Nil</td> </tr> </table>	Stock value in A	4,000	Stock cost B	3,000	Profit	<u>£1,000</u>	Assets	Reserves	A 20,000	15,000	B 11,000	1,000	31,000	<u>16,000</u>	Less Profit 1,000	1,000		<u>£30,000</u>		<u>£15,000</u>	Cost of Investment	10,000	Capital	7,000	Reserve	3,000		<u>10,000</u>		Nil
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Capital	7,000																																																											
Reserve	3,000																																																											
	<u>10,000</u>																																																											
	Nil																																																											

The Case

Balance Sheet

Notes

<p>A owns 100% of the shares in B At the time of acquisition B had no reserves B has proposed a dividend which has not been included in A's accounts</p>	<p>Assets Investment in B Proposed Dividend</p> <p>Capital Reserves</p>	<p>A 20,000 10,000</p> <p><u>£30,000</u> <u>15,000</u> 15,000</p> <p><u>£30,000</u></p>	<p>B 20,000 (4,000)</p> <p><u>£16,000</u> <u>10,000</u> 6,000</p> <p><u>£16,000</u></p>	<p>Consolidated 40,000</p> <p><u>£40,000</u> <u>15,000</u> 25,000</p> <p><u>£40,000</u></p>	<p>The proposed dividend must be included in the Balance Sheet of A, which will increase the reserves and create a debtor. The debtor in A will be set against the proposed dividend creditor in B</p> <p>Assets Reserves 20,000 15,000</p> <p>A Dividend due 4,000 4,000 B Proposed Dividend 20,000 6,000 Dividend (4,000) — <u>£40,000</u> <u>£25,000</u></p>
<p>A purchased 80% of B when its reserves were £10,000 The next year it made a profit Paid a dividend The following year made a profit No further dividends were paid or declared</p>	<p>Assets Investments in B — cost</p> <p>Capital Reserves</p>	<p>A 20,000 10,000</p> <p><u>£30,000</u> <u>15,000</u> 15,000</p> <p><u>£30,000</u></p>	<p>B 18,000 —</p> <p>Cost of Control 400</p> <p><u>£18,000</u> <u>5,000</u> 13,000</p> <p>Minority Interest 3,600</p> <p><u>£18,000</u></p>	<p>Consolidated 38,000</p> <p><u>£38,400</u> <u>15,000</u> 19,800</p> <p><u>£38,400</u></p>	<p>After A acquired B the investment earned profits but the dividend paid was greater than the profits and was part paid out of pre-acquisition reserves, which affects the cost of control calculation. The extent to which the dividend paid exceeds post-acquisition profits, £2,400, represents a reduction of the cost of the investments</p>

Balance Sheet

Notes

The Case

	Total	Min. Int. ($\frac{1}{2}$)	Parent Cost of Reserves Control
Capital Reserves	5,000	1,000	4,000
Pre-Acq. Post-Acq.	10,000	2,000	8,000
Yr. 1. Dividend	2,000	400	1,600
Yr. 2.	(5,000)	(1,000)	(4,000)
	6,000	1,200	—
	<u>£18,000</u>	<u>3,600</u>	<u>9,600</u>
Reserves A			15,000
Cost of investmt.			(10,000)
		<u>£3,600</u>	<u>(400)</u>
			<u>19,800</u>

Had the dividend been equal to or less than the post-acquisition profits the remaining balance would be distributable reserves

	A	B	C
Net Assets	53,000	173,000	664,000
Investment B	240,000		
C	252,000		
Current a/c B	60,000	(58,000)	
C	30,000		(30,000)
	<u>£635,000</u>	<u>£115,000</u>	<u>£634,000</u>
Ord. Shares	400,000	80,000	270,000
Reserves	125,000	17,000	59,000
Proposed Dividends	30,000	8,000	5,000
8% Debentures	80,000	10,000	300,000
	<u>£635,000</u>	<u>£115,000</u>	<u>£634,000</u>

A held stocks bought from B at £4,000; the stock cost B £3,000.

There was £2,000 cash sent from B to A which had not been received by A.

A had not anticipated the income from the proposed dividends by B and C.

A acquired 90% of B when its reserves were £5,000; no dividend had been proposed or paid other than the one on the present Balance Sheet.

A acquired 60% of C when its reserves were £30,000; in the first year it made profits of £25,000 and paid a dividend of £35,000.

Working Papers

<i>B</i>	<i>Total</i>	<i>Minority 10%</i>	<i>Parent Company Cost of Control</i>	<i>Reserves</i>
Capital	80,000	8,000	72,000	
Reserves				
Pre	5,000	500	4,500	
Post	12,000	1,200		10,800
Proposed Dividend	8,000	800		7,200
	<u>£105,000</u>	<u>£10,500</u>	<u>£76,500</u>	<u>£18,000</u>
Cost of Investmts.			240,000	
		<u>£10,500</u>	<u>£163,500</u>	<u>£18,000 X</u>
<i>C</i>	<i>Total</i>	<i>Minority 40%</i>	<i>Cost of Control</i>	<i>Reserves</i>
Capital	270,000	108,000	162,000	
Reserves				
Pre	30,000	12,000	18,000	
Yr. 1 Post	25,000	10,000	15,000	
Dividend Paid	(35,000)	(14,000)	<u>(21,000)</u>	(6,000)
Subsequent Yrs.	39,000	15,600		23,400
Proposed Dividend	5,000	2,000		3,000
	<u>£334,000</u>	<u>£133,600</u>	<u>£174,000</u>	<u>£26,400</u>
Cost of Investmts.			252,000	
		<u>£133,600</u>	<u>£78,000</u>	<u>£26,400 Y</u>
Reserves of A Unrealised Profit on Stock				125,000 } (1,000) Z
X+Y+Z		<u>£144,100</u>	<u>£241,500</u>	<u>£168,400</u>

<i>Net Assets</i>		<i>Debentures</i>	
A	53,000	A	80,000
Cash		B	10,000
from B	2,000	C	300,000
B	173,000		
C	664,000		
	<u>892,000</u>		<u>£390,000</u>
Less			
Unrealised			
Profit on			
Stock	1,000		
	<u>£891,000</u>		

Calculation of subsequent years profit for C			
Balance per Balance Sheet			59,000
At acquisition	30,000		
Profits Yr. I	<u>25,000</u>		
	55,000		
Less Dividend paid	<u>35,000</u>		
			20,000
Earned subsequently			<u>£39,000</u>

Balance Sheet A Ltd Consolidated

Net Assets	891,000
Cost of Control	241,500
	<u>£1,132,500</u>
Capital	400,000
Reserves	168,400
Minority Interest	144,100
8% Debentures	390,000
Proposed Dividends	30,000
	<u>£1,132,500</u>

The following points should be studied:

- (1) The shareholders of A would not be aware of the large debenture borrowings by C, nor would they be aware that the total investment of the group is over £1,000,000.
- (2) The unrealised profit on the stock has to be eliminated by reducing the reserves and the assets.
- (3) The cash in transit must be included in the total assets.
- (4) The loan accounts are set off against each other.
- (5) Because the Holding Company has not anticipated the receipt of the subsidiaries' proposed dividend this increases the holding company's reserves.
- (6) The dividend payment by C after A had acquired a majority holding was greater than the post-acquisition profits earned and therefore it reduced the cost of the investment.
- (7) If the debentures in a subsidiary were partly held by either the holding company or another subsidiary, the balance owned by outsiders is not included in the minority interest calculation, but is shown as a separate liability. The inter-group indebtedness is eliminated.

Salient features of Statement of Standard Accounting Practice 1

Accounting for Results of Associated Companies

The purpose is to ensure that accounts of investing companies show the manner in which such companies' funds are being employed and the source of the income.

An associated company being defined as one in which some other company (the investing company) holds not less than 20% of the capital, and bearing in mind the distribution of other shareholdings, the investing company is able to exercise considerable influence over the associated company.

Accounting for income

By Investing company

Dividends received – to be taken into account by investing company up to end of its final year.

Dividends receivable – to be taken into account only in so far as they relate to the period covered by the investing company's accounts.

In consolidated accounts

The investing group's share of associated company's profits or losses to be shown. Profit before tax and taxation shown separately. Similarly the investing company's share of retained profit also to be indicated.

EXAMPLE OF PROFIT AND LOSS ACCOUNT
FOR A COMPANY WITHOUT SUBSIDIARIES

*Profit and Loss Account of an Investing Company
Incorporating Results of Associated Companies*

Turnover (of the investing company)		<u>£X</u>
Operating profit (after charging depreciation and all other trading expenses of the investing company)		£ X
Share of profits less losses of associated companies		<u>X</u>
Profit before taxation		X
Taxation:		
Investing company	X	
Associated companies	<u>X</u>	
		<u>X</u>
Profit after taxation before extraordinary items		X
Extraordinary items (investing company and share of associated companies' items) after taxation		<u>X</u>
Profit attributable to members of the investing company comprising:		X*
Profit of the investing company	X	
Profits retained in associated companies	<u>X</u>	
	<u>£X*</u>	
Dividends		<u>X</u>
Net profit retained		<u>£X**</u>
By the investing company	X	
In associated companies	<u>X</u>	
	<u>£X**</u>	

Questions

9.1 Alpha and Beta have been in competition for a number of years but due to a contraction in the industry they have decided to amalgamate by setting up a company, Alphabet Ltd, to take over all the assets and liabilities of both companies. At the date of takeover the Balance Sheets were as follows:

	<i>Alpha</i>	<i>Beta</i>
Fixed Assets:		
Land and Buildings	6,000	1,000
Machinery and Equipment	4,000	3,500
Current Assets:		
Stock	3,250	2,200
Debors	5,200	4,300
Bank	1,250	1,720
	<u>9,700</u>	<u>8,220</u>
Less Creditors	<u>4,900</u>	<u>5,200</u>
	4,800	3,020
	<u>£14,800</u>	<u>£7,520</u>
Capital Accounts	<u>£14,800</u>	<u>£7,520</u>

The values of the assets to be taken over were agreed as follows:

	<i>Alpha</i>	<i>Beta</i>
Land	12,500	9,000
Machinery	2,220	1,250
Stock	3,000	2,400

A provision for bad debts of 10% had to be created for both firms but the other assets and liabilities would remain the same.

The settlement was to be by the issue of ordinary and preference shares in the ratio of Alpha 2:3, Beta 3:2.

You are required to show the profit or loss to each company taken over and prepare the opening Balance Sheet of Alphabet Ltd.

9.2 Low Ltd has been experiencing a period of difficult trading, and it has therefore decided to form a new company, Middle Ltd, to take over its assets.

Balance Sheet of Low Ltd is as follows:

£1 Ordinary Shares	300,000	Fixed Assets	390,000
£1 3% Preference Shares	30,000	Current Assets	30,000
5% Debentures	50,000	P and L a/c	80,000
Retained Profits	—		
Current Liabilities	120,000		
	<u>£500,000</u>		<u>£500,000</u>

Terms of the reconstruction were as follows:

Middle Ltd	to have an authorised capital of £1.5m. in ordinary shares of £1 and to issue 7% debentures to cover amount required for issue to Low Ltd.
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Purchase consideration was calculated as follows:

5% Debenture holders accepted £25,000 7% debentures in Middle Ltd and 10 £1 ordinary shares for every £10 of debentures in Low Ltd.
 3% Preference shareholders accepted 5 £1 ordinary shares in Middle Ltd for every 6 preference shares held in Low Ltd.
 Ordinary shareholders accepted 1 ordinary share in Middle Ltd for every 3 shares in Low Ltd.
 Creditors accepted 2 ordinary shares in Middle Ltd for every £4 due by Low Ltd and £80,000 in cash.

Middle Ltd valued the fixed assets of Low Ltd at £340,000.

You are required to prepare the accounts in respect of the above transactions in the books of Low Ltd, and the Balance Sheet of Middle Ltd on the completion of all the above transactions.

9.3 The summarised Balance Sheet of Stalemate Ltd on 30 June was as follows:

<i>Balance Sheet</i>			
Issued share capital:		Goodwill	24,000
150,000 Ordinary shares of £1 each	150,000	Freehold properties	72,000
60,000 6% Cumulative preference share of £1 each	60,000	Plant and machinery	109,000
5% Debentures	40,000	Stock in trade	23,000
Trade Creditors	80,000	Debtors	31,000
		Profit and Loss a/c	52,000
		Bank	19,000
	<u>£330,000</u>		<u>£330,000</u>

Note: Preference dividend is 5 years in arrears.

The following scheme of reconstruction has been accepted by all concerned.

A new company was formed to take over all the assets of Stalemate. The authorised capital of the company is 200,000 ordinary shares of £1 each.

Purchase consideration was calculated on the following basis:

- (i) The holders of the 5% debentures accepted, in settlement of their claim, an allotment, at par, by the new company, of 300 8% debentures of £100 each and 12,000 shares of £1 each.
- (ii) The preference shareholders received an allotment, at par, of four ordinary shares in the new company for every five preference shares in the old company, and, in addition, one ordinary share in the new company for every £3 of arrears of preference dividend.
- (iii) The trade creditors of the old company accepted, in full settlement, an allotment, at par, by the new company, of 280 8% debentures of £100 each and £50,000 in cash.
- (iv) The ordinary shareholders of the old company received an allotment, at par, of one share in the new company for every two shares in the old company.
- (v) The plant and machinery was valued at £86,000. The stock in trade, debtors and balance at bank were taken over at the amounts shown in the Balance Sheet of the old company. The balance of the purchase consideration is to be taken as the value of the freehold properties.
- (vi) The remainder of the authorised capital of the new company was issued to the public, at par, for cash and fully paid up.

Close the books of Stalemate Ltd and show the Balance Sheet of the new company.

9.4 From the following Balance Sheets you are required to prepare a consolidated Balance Sheet of H. Co. and its two subsidiaries. There are no inter-company balances and the investments by H. and S. were made at the same date. There are no pre-acquisition profits or reserves.

H. Co.

Capital	100,000	Investment in 60,000 S.	
P and L a/c	9,000	Co. Shares at cost	70,000
Creditors	10,000	Investment in 10,000 S.S.	
Reserve	7,000	Co. Shares at cost	12,000
		Bills Receivable	1,000
		Stock-in-trade	10,000
		Fixed Assets	23,000
		Current Assets	10,000
	<u>£126,000</u>		<u>£126,000</u>

S. Co.

Capital	75,000	Investment in 30,000 S.S.	
Reserve	8,000	Co. Shares at cost	36,000
P and L a/c	4,000	Fixed Assets	40,000
Bills Payable	5,000	Current Assets	16,000
	<u>£92,000</u>		<u>£92,000</u>

<i>S.S. Co.</i>			
Capital	50,000	Fixed Assets	39,000
Reserve	5,000	Current Assets	20,000
P and L a/c	4,000		
	£59,000		£59,000

9.5 The following are the Balance Sheets of Large Ltd and its subsidiary Small Ltd. You are required to prepare a consolidated Balance Sheet.

<i>Large Ltd</i>			
Share Capital – 50,000		Investment in Small Ltd at	
Shares of £1 each	50,000	cost – 30,000 shares	42,000
5% Debentures	20,000	Fixed Assets	20,000
Sundry Creditors	10,000	Sundry Debtors	
General Reserve	5,000	Small Ltd	2,000
P and L a/c	8,000	Others	17,000
			19,000
		Bills Receivable	3,000
		Stock-in-trade	8,000
		Cash at Bank	1,000
	£93,000		£93,000

<i>Small Ltd</i>			
Share Capital – 40,000		Fixed Assets	38,000
Shares of £1 each	40,000	Sundry Debtors	11,000
Sundry Creditors	6,000	Stock-in-trade	12,000
Bills Payable to L. Ltd	7,000	Cash at Bank	3,000
General Reserve	5,000		
P and L a/c	6,000		
	£64,000		£64,000

Large Ltd purchased the shares of Small Ltd at a time when the General Reserve and Profit and Loss Accounts stood at £4,000 and £2,400, respectively.

The stock-in-trade held by Large Ltd includes stock purchased from Small Ltd for £3,000, Small Ltd having made a profit thereon of 20 per cent.

9.6 Summarised Balance Sheets of Grey Ltd, Black Ltd and White Ltd at 31 December are shown below:

	<i>Grey Ltd</i>	<i>Black Ltd</i>	<i>White Ltd</i>
Issued Share Capital (£1 ordinary shares)	50,000	60,000	100,000
Revenue Reserves at 31 December	39,700	35,600	28,000
6% Debenture Stock	40,000	85,000	90,000
Loan from Grey	—	14,000	—
Proposed Dividends	10,000	10,000	12,500
Current Liabilities	15,300	36,400	151,500
	<u>£155,000</u>	<u>£241,000</u>	<u>£382,000</u>
Fixed Assets	38,000	90,000	184,000
60,000 shares in Black Ltd at cost	80,000	—	—
80,000 shares in White Ltd at cost	—	125,000	—
Loan to Black Ltd	14,000	—	—
Current Assets	23,000	26,000	198,000
	<u>£155,000</u>	<u>£241,000</u>	<u>£382,000</u>

Grey Ltd acquired its shares in Black Ltd when the revenue reserves of Black Ltd were £28,000 and Black Ltd acquired its shares in White Ltd when the revenue reserves of White Ltd were £44,000. At the time of acquisition no dividends were proposed, and no changes have occurred in the issued share capital of either subsidiary since acquisition.

The proposed dividends for each company at 31 December have been deducted in the calculation of revenue reserves for the relevant company, but the dividends have not been anticipated in the accounts of the recipient companies.

All debenture stock is held by owners outside the group. Debenture interest for the year has been deducted in the calculation of profits, and accrued debenture interest has been included in current liabilities as appropriate.

Included in the current assets of Black Ltd at 31 December were goods which were purchased from Grey Ltd for £3,000. These goods had cost Grey Ltd £2,520.

Required: The consolidated balance sheet of the group at 31 December.

9.7 The summarised Balance Sheets of Sky Ltd, Cloud Ltd and Moon Ltd at 31 December 19–1 were:

	<i>Sky Ltd</i>	<i>Cloud Ltd</i>	<i>Moon Ltd</i>
Fixed Assets			
Freehold property	23,000	68,000	53,000
Equipment Less depn.	8,000	60,000	36,000
Investments	120,000		
Current Assets	28,000	57,000	60,000
Current a/cs			
Moon	20,000		
Cloud	25,000		
	73,000	57,000	60,000
Less Liabilities	25,000	10,300	31,500
Current a/c Sky	—	22,000	20,000
	48,000	24,700	8,500
	£199,000	£152,700	£97,500
Share Capital (£ Ords)	120,000	60,000	50,000
P. and L a/c	79,000	32,700	47,500
6% Redeemable Debentures	—	60,000	—
	£199,000	£152,700	£97,500

An analysis showed:

Investments: 40,000 shares in Cloud Ltd cost £70,000 and at the date of acquisition the Profit and Loss Account was £25,000; 40,000 shares in Moon Ltd cost £50,000 and at the date of acquisition the Profit and Loss Account of Moon was £40,000.

Dividends: The subsidiary companies had not paid any dividends since they were acquired.

Current Accounts: Sky Ltd has sent a cheque for £3,000 to Cloud Ltd which was not received and entered in the books until January 10 19–2; Moon Ltd had sold goods to Sky Ltd which cost £6,000 for £12,000. 25% of the goods were still held in stock by Sky Ltd at 31 December 19–1

Required: A consolidated Balance Sheet at 31 December 19–1 for the group (all calculations should be submitted).

CHAPTER 10

Budgetary Control

Financial accounting is concerned with the recording of monetary transactions after the event, and the results have then been translated via the Income Statement showing the effect of such transactions in the form of profit or loss.

Management, however, may wish to know the effect of a variety of transactions prior to the event and as an aid to this process will require the preparation of budgets by as many departmental heads as is considered necessary.

A budget is defined as 'an attempt to estimate future income and expenditure on the basis of past events after allowing for expansion and rising costs'. It is a statement of management policy, setting a standard to compare with actual results.

Assume a company has sold 1,000 products at £2 each, the cost of which are materials 75p, labour 40p, overheads 15p. The results for the trading period would be:

Sales	1,000 @ £2		2,000
Materials	1,000 @ 75p	750	
Labour	1,000 @ 40p	400	
Overheads	1,000 @ 15p	<u>150</u>	
			1,300
Profit			<u>£700</u>

If management considered that it was possible to increase Sales by 50% they would require to know the effect of the expansion in terms of additional cost. A budget would be prepared as follows:

Anticipated revenue:			
Sales	1,500 @ £2		3,000
Anticipated costs:			
Material	1,500 @ 75p	1,125	
Labour	1,500 @ 40p	600	
Overheads	1,500 @ 15p	<u>225</u>	
			1,950
Anticipated profit			<u>£1,050</u>

As a result of the preparation of budgets management can determine the funds required to meet future programmes and the manner in which funds can be raised.

In practice the preparation of budgets commences some months prior to the beginning of a financial year and involves the consideration of the results for the last full financial year, the results to date, say the half-year position of the current financial year compared with the anticipated results, and any future trends in costs and selling prices. The preparation of budgets involves considerable co-ordination between a number of departments, e.g. sales manager, production manager, purchasing manager. The sales department may have markets but the production manager has neither the capacity nor the labour force to meet such targets – the purchasing manager may have difficulty in obtaining supplies in the required quantities. The board of directors may not consider it possible to raise the necessary funds to meet expansion. Government policy may inhibit capital investment.

The inception of a budget policy will require the setting up of a programme and an understanding of the many problems involved.

Necessity for Budgetary Control

(1) Growth of business requires greater control over activities – owner must delegate authority but requires targets for control purposes.

(2) Increased variety in products requires control of facilities.

(3) Need to ensure there is adequate labour force and it is fully utilised.

(4) Need to control expenditure on research and development and cost of research into new markets.

(5) Need to control activities of departmental managers.

(6) Ensure that all expenditure is allocated to definable sections of the organisation and managers aware of their responsibilities.

Budgetary control might be defined as a system of controlling costs, co-ordinating departments, defining responsibility and comparing actual results with budgeted targets and taking necessary corrective action.

The results of budgetary control are the combining of ideas, delegation of authority, management decision-making, the directing of capital expenditure to the most profitable projects.

The setting up of a budgetary control system will require: (a) the creation of cost centres to which expenditure can be charged; (b) preparation of organisation chart fixing responsibility; (c) compilation of a budget manual; (d) the establishment of a budget committee to co-ordinate departmental budgets and agree targets.

The budget committee consists of a body of executives charged with responsibility for final targets and might include: directors, company secretary, company accountant, works manager, sales manager, purchasing manager, chief engineer, design manager.

The purpose of the committee is to (i) issue instructions by means of budget manual; (ii) provide background information e.g. board decision affecting future planning; (iii) agree on adjustments to departmental budgets; (iv) take account of key factors; (v) approve the master budget.

Budget Manual

This gives the rules regarding preparation of individual budgets. It will provide: (1) Description of system (including document flow chart). (2) Responsibility of individuals and departments for completion of forms. (3) Method of completing forms. (4) Code numbers of all forms and accounts. (5) Deadlines for completion of budgets and periodic statements explaining variances.

Key Factors

Key factors are those which must be assessed to ensure that the budget can be met, and might include: (a) material, labour availability and quantity; (b) capital requirements; (c) delivery dates of new plant; (d) possibility of obtaining additional space; (e) market changes; (f) research necessary for developing new product and/or market; (g) productive capacity; (h) demand for product at given price levels; (i) government policy, i.e. taxation and licensing.

The budget committee will be faced with the problem that either demand exceeds capacity or capacity exceeds demand, and the following factors will require investigation: (i) research into substitutes or acquisition of sources of supply; (ii) training programmes, work study, new machines, etc., to improve or overcome labour deficiencies; (iii) introduction of shift working to overcome production bottlenecks or placing of work with outside suppliers; (iv) consideration of alternatives of additional advertising or price reduction to increase proportion of market.

Sales Budget

The system of budget preparation must follow a logical pattern, commencing with the results of market research and leading to preparation of the sales budget. In examination questions it will often be necessary to calculate sales by means of cost information, profit margin and anticipated revenue.

Example

Material X – 3 lb. @ £3 Material Y – 3 lb. @ £1
 Labour – 7 hrs. @ £1 per hr.; 2½ hrs. @ 80p per hr.
 Overheads – 33⅓% of direct labour
 Profit margin – 20% of selling price
 Sales revenue – £4,200,000

Calculations are:	Cost	Material X 3 lb. @ £3	9	
		Y 3 lb. @ £1	3	
				12
		Labour 7 hrs. @ £1	7	
		2½ hrs. @ 80p	2	
				9
		Overheads 33⅓% of direct labour	3	
			24	
		Profit @ 20% of selling price = 25% of cost	6	
		Selling price	£30	

Revenue required = $\frac{\pounds 4,200,000}{30}$ \therefore Sales 140,000 units
 Selling price per unit

The sales budgets, in addition to showing revenue by products, will also indicate sales by division, region and individual salesmen. Information has been obtained from market research, salesmen's reports, past sales and effects of government and company policy.

Key factor: may well be selling price.

Production Budget

An indication of requirements to meet the sales target will take into account production to maintain stock levels and effect of existing stocks:

Sales, as above	140,000
Add closing stock (say)	<u>25,000</u>
	165,000
Less opening stock (say)	<u>20,000</u>
Required	<u>145,000</u>

The production manager is now in a position to calculate labour requirements and availability and will use the information for the preparation of labour utilisation budgets, bearing in mind the size of the labour force and the time loss through holidays, sickness and strikes, etc.

The production budget, in conjunction with the labour utilisation budget, will enable decisions to be reached as to the necessity for overtime working, sub-contracting, plant purchases, price reductions, advertising increase or production changes to overcome the variance between capacity and requirements.

Labour utilisation

	Grade A	Grade B
Hours per unit	7	2½
Production	145,000	145,000
Total hours	1,015,000	362,500
Cost @ £1	£1,015,000	@ 80p £290,000 = £1,305,000
Present labour force	600	180
Working year – 5 days x 8 hrs. x 50 wks. =		2,000 hrs.
Less Statutory holidays	2 wks.	
Sickness	1 wk.	
Idle time	<u>1 wk.</u>	
	4 wks. x 40 hrs.	<u>160</u>
		1,840 hrs
Hours available – 600 x 1,840	1,104,000	180 x 1,840 <u>331,200</u>
Budget requirements	<u>1,015,000</u>	<u>362,500</u>
Surplus hrs.	89,000	Shortfall 31,300
Staff equivalent not utilised	48	Staff required 17
Capacity	92%	110%

The labour utilisation budget is an indication of the need to train Grade B personnel in order to overcome shortages. Management also has to come to a decision concerning the surplus Grade A labour: is it possible to obtain work or must they be declared redundant?

A similar budget will be prepared in respect of machine hours, indicating either the necessity to purchase additional machines or hire out surplus machine time.

Key factors: labour – the type of labour available; machines – capital required for new purchases.

Material usage and purchases

Based on production levels and allowing for stocks of raw materials:

Material		X	Y	
Production	145,000 units	3 lb.	3 lb.	
	usage	435,000	435,000	
	Add Closing Stock (say)	22,000	15,000	
		<hr/>	<hr/>	
		457,000	450,000	
	Less Opening Stock (say)	38,000	25,000	
		<hr/>	<hr/>	
	Purchases	419,000	425,000	
		<hr/> <hr/>	<hr/> <hr/>	
		@ £3	@ £1	
		£1,257,000	£425,000	= £1,682,000

Key factor: may be supplier's ability to maintain delivery dates.

Expenses Budgets

Each department will prepare details of anticipated expenditure by classification. Factory overheads will include the cost of indirect material, indirect labour, management costs, factory rent, rates, light, heat, power, plant depreciation and warehousing.

Office overheads will include costs of office salaries, welfare and personnel, office rent and rates, light and heat and equipment depreciation.

Selling and distribution overheads will include sales salaries, advertising, entertaining, transport costs (including vehicle depreciation).

Subdivision may require details of types of advertising; for example, television, press, radio.

Research and development overheads will include costs of the drawing office, engineers' or chemists' salaries, with a breakdown of potential costs by project.

Administration overheads include costs of the directorate where these cannot be allocated to particular sections, consultancy fees, conferences, and the costs of raising funds, e.g. interest charges, legal and bank charges.

The expenditure budgets will form the basis for the cash budget showing anticipated receipts and payments.

All budgets mentioned so far will be prepared on an annual basis, the funds requested being available only for the respective financial year as there is no carry forward of unspent balances. The budgets are not an indication of maximum expenditure but levels allowed on the basis of production and sales, any changes in these affecting expenditure levels.

In addition the information should be provided on a monthly or other basis, e.g. seasonal, in order that actual results may be compared with targets as quickly as possible so that remedial action can be taken.

Capital Expenditure Budget

This gives an indication of the projects to be undertaken on a long-term basis, say up to five years, and on which annual approval will be necessary, the unspent amounts being carried forward until the project is completed. In times of inflation it will be necessary to review the unspent portions to ascertain the increase in funds necessary to complete purchase.

The capital expenditure budget will form a basis for management decisions as to the type of finance to be used and the manner in which it is to be raised.

Key factor: may well be the state of the money market, e.g. prospects and costs of raising funds.

Cash Budget

This will indicate receipts by type, e.g. sales revenue, investment income, plant disposal proceeds and payments in accordance with various expenditure budgets.

It will give an indication of available balance or funds required on at least a monthly basis and gives due notice as to action required, e.g. short-term overdraft or loan or long-term capital.

Key factor: likely to be the rate of inflow of funds.

Based on anticipated production, expenditure will be £435,000 (145,000 units @ £3) and departmental budgets would appear as:

	<i>Factory</i>	<i>Research</i>	<i>Office</i>	<i>Admin.</i>	<i>Selling</i>	<i>Total</i>
Indirect						
Materials	80,000	20,000				100,000
Indirect						
Labour	30,000					30,000
Mgt. Salaries	15,000	5,000	3,000	12,000	20,000	55,000
Supervisory	14,000					14,000
Salaries						
Office and Admin.						
Expenses	2,000	4,000	7,000	3,000	10,000	26,000
Legal Costs and						
Interest		7,000	4,000	8,000		19,000
Insurance	10,000	8,000	5,000	12,000	15,000	50,000
Depreciation	80,000	10,000	6,000	3,000	42,000	141,000
	<u>£231,000</u>	<u>£54,000</u>	<u>£25,000</u>	<u>£38,000</u>	<u>£87,000</u>	<u>£435,000</u>

	<i>Cash Budget</i>	<i>Monthly Details</i>
	Total	
Receipts – Sales	£4,200,000	
Payments – Materials	1,682,000	
Labour	1,305,000	
Indirect Material	100,000	
Indirect Labour	30,000	
Salaries	69,000	
General Expenses	26,000	
Legal Costs	19,000	
Insurance	50,000	
	3,281,000	
Balance	919,000	
	£4,200,000	

Allowance should be made for the length of credit taken and given by customers and creditors and the fact that some payments are made at fixed times in the year.

The monthly cash budget would also indicate the balance brought forward at the commencement of each period.

Master Budget

This is the amalgamation of all budgets with the exception of capital budgets, in the form of an Income Statement and Balance Sheet, giving an indication of percentage return on sales, revenue expenses as a percentage of revenue, state of working capital, changes in fixed assets.

Key factor: may well be the expected return on capital employed.

<i>Master Budget</i>			
<i>(Income Statement)</i>			<i>%</i>
Revenue – 140,000 units @ £30		£4,200,000	100
Expenditure			
Material – 140,000 @ £12		1,680,000	40
Labour – 140,000 @ £9		1,260,000	30
Factory Overheads	} Would be detailed by type of expenditure	231,000	5.5
Research		54,000	1.3
Office Overheads		25,000	0.6
Admin. Overheads		38,000	0.9
Selling Overheads		87,000	2.1
		3,375,000	80.4
Profit		825,000	19.6
		£4,200,000	100.0

The material and labour costs incurred in production of the additional 5,000 units will be shown on the Balance Sheet as stock.

The total costs and percentage return will be compared with previous years' results after allowing for changes in sales, production levels and effects of inflation. Management will be able to make forecasts as to anticipated interim and final dividends.

From the information provided the following budgets will be prepared on a quarterly and annual basis:

Sales	Units and Revenue
Production	Units
Material Usage and Purchases	Quantities and Costs
Labour Utilisation	Hours and costs
Machine Utilisation	Hours
Expenses	Costs
Cash	Receipts and payments
Profit and Loss	
Balance Sheet	

The Balance Sheet at 1 January was:

	<i>Cost</i>	<i>Depre- ciation</i>	<i>Net</i>
Leaseholds	450,000	90,000	360,000
Plant	320,000	125,000	195,000
Fittings	86,000	54,000	32,000
Vehicles	25,000	15,000	10,000
	<u>£881,000</u>	<u>£284,000</u>	<u>£597,000</u>
Current Assets			
Stocks: Finished Goods	304,000		
Raw Materials	330,000		
Debtors	50,000		
Bank	<u>130,000</u>		
		814,000	
Current Liabilities			
Creditors	80,000		
Taxation	130,000		
Proposed Dividend	<u>58,000</u>	<u>268,000</u>	
			546,000
			<u>£1,143,000</u>
Ordinary Shares of £1			580,000
Retained profits			313,000
8% Debentures			250,000
			<u>£1,143,000</u>

Expenditure budgets for the year have been prepared as follows:

	<i>Payable</i>	<i>Factory</i>	<i>Admin.</i>	<i>Selling</i>	<i>Total</i>
Rent and Rates	Qtrly.	44,000	26,000	14,000	84,000
Light and Heat	"	59,000	14,800	11,800	85,600
Transport	Monthly	—	—	6,200	6,200
Insurance	Annual	58,800	6,400	2,700	67,900
Repairs	Monthly	51,600	400	1,000	53,000
Commission	Qtrly.	—	—	25,200	25,200
Salaries	Monthly	112,100	31,600	55,000	198,700
Loan Interest	Qtrly.	—	20,000	—	20,000
Advertising	Monthly	—	—	90,000	90,000
Depreciation:					
Lease 2%		7,000	1,000	1,000	9,000
Plant 10%		37,600	—	—	37,600
Fittings 7½%		3,900	1,800	2,300	8,000
Transport 20%		—	—	7,000	7,000
		<u>£374,000</u>	<u>102,000</u>	<u>216,200</u>	<u>692,200</u>

Capital expenditure approved:

Plant — £50,000 1st Quarter
 Fittings — £20,000 2nd Quarter
 Vehicles — £10,000 3rd Quarter

The proposed dividend and taxation outstanding at 1 January will be paid in the first quarter. The tax on the dividend will be paid in the second quarter.

An interim dividend of £29,000 will be paid in the third quarter.

A final dividend of 15% will be proposed. Taxation will be estimated at £42,000.

Seventy-five per cent of sales are for cash; remaining debtors pay two months after sale.

Creditors are paid one month after delivery.

Stocks

	<i>Product</i>	
	<i>A</i>	<i>B</i>
Finished Goods	£40	£28
Opening	2,000 units	8,000 units
Closing	4,000	16,000
	<i>Component</i>	
	<i>X</i>	<i>Y</i>
Materials	£8	£5
Opening	10,000 units	50,000 units
Closing	6,000	10,000

Sales for the year are budgeted as follows:

	Product: A Selling Price £60	B £45
1st. Quarter	6,000 units	10,000 units
2nd. Quarter	7,000 units	8,000 units
3rd. Quarter	2,000 units	6,000 units
4th Quarter	6,000 units	4,000 units

Material specification:

Component	X	Y
Cost	£8	£5
Product A	3	2
Product B	1	3

Labour specification:

Grade	1	2
Rate	£2 per hr.	£1 per hr.
Product A	2 hrs.	2 hrs.
Product B	1 hr.	3 hrs.
Machine time		
Department	A	B
Product A	½ hr.	1 hr.
Product B	½ hr.	1 hr.

The factory operates an 8 hr. 5-day week for 50 weeks. 2 hrs. per week is considered idle time and 12 days per employee for statutory holidays, sickness, etc. 10% of machine time is allowed for maintenance.

Sales Budget

Product	A Units	Value (£60)	B Units	Value (£45)	Total revenue
1st qtr.	6,000	360,000	10,000	450,000	810,000
2nd qtr.	7,000	420,000	8,000	360,000	780,000
3rd qtr.	2,000	120,000	6,000	270,000	390,000
4th qtr.	6,000	360,000	4,000	180,000	540,000
	<u>21,000</u>	<u>£1,260,000</u>	<u>28,000</u>	<u>£1,260,000</u>	<u>£2,520,000</u>
	<i>Cash sales</i>		<i>Credit sales</i>		
	(75%)		(25%)		
1st qtr.	607,500		202,500		
2nd qtr.	585,000		195,000		
3rd qtr.	292,500		97,500		
4th qtr.	405,000		135,000		
	<u>£1,890,000</u>		<u>£630,000</u>		£2,520,000

Cash sale receipts received in quarter.

Credit sale receipts: 1 month relating to quarter, 2 months arrears from previous quarter.

Production Statement

	<i>Total</i>	<i>1st qtr.</i>	<i>2nd qtr.</i>	<i>3rd qtr.</i>	<i>4th qtr.</i>
Product A					
Sales	21,000	6,000	7,000	2,000	6,000
Add					
Closing Stock	<u>4,000</u>	<u>1,000</u>	<u>2,000</u>	<u>3,000</u>	<u>4,000</u>
	25,000	7,000	9,000	5,000	10,000
Less					
Opening Stock	<u>2,000</u>	<u>2,000</u>	<u>1,000</u>	<u>2,000</u>	<u>3,000</u>
Production required	<u>23,000</u>	<u>5,000</u>	<u>8,000</u>	<u>3,000</u>	<u>7,000</u>
Product B					
Sales	28,000	10,000	8,000	6,000	4,000
Add					
Closing Stock	<u>16,000</u>	<u>4,000</u>	<u>8,000</u>	<u>12,000</u>	<u>16,000</u>
	44,000	14,000	16,000	18,000	20,000
Less					
Opening Stock	<u>8,000</u>	<u>8,000</u>	<u>4,000</u>	<u>8,000</u>	<u>12,000</u>
Production required	<u>36,000</u>	<u>6,000</u>	<u>12,000</u>	<u>10,000</u>	<u>8,000</u>

For the purpose of illustration stocks have been assumed to move evenly during the year.

Material Usage and Purchasing Budget

Component		X	Y	Total Cost
Annual				
Product A	23,000	69,000	46,000	
B	36,000	<u>36,000</u>	<u>108,000</u>	
Total Usage		105,000	154,000	
Add Closing Stock		<u>6,000</u>	<u>10,000</u>	
		111,000	164,000	
Less Opening Stock		<u>10,000</u>	<u>50,000</u>	
Total Purchases		101,000	114,000	
		@ £8	@ £5	
		£808,000	£570,000	£1,378,000

Material Purchasing

Component	1st Qtr.		2nd Qtr.		3rd Qtr.		4th Qtr.		
	X	Y	X	Y	X	Y	X	Y	
A 3X	15,000	10,000	8,000	24,000	16,000	3,000	9,000	7,000	21,000
2Y	6,000	18,000	12,000	12,000	36,000	10,000	10,000	30,000	8,000
B 1X	21,000	28,000	36,000	36,000	52,000	19,000	19,000	36,000	29,000
3Y	1,500	2,500	3,000	3,000	5,000	4,500	4,500	7,500	6,000
Add Closing Stock	22,500	30,500	39,000	57,000	37,000	54,500	20,500	38,500	35,000
Less Opening Stock	10,000	50,000	1,500	2,500	37,500	(19,500)	3,000	5,000	4,500
Quantity Purchased	12,500	(19,500)	37,500	54,500	37,500	(19,500)	20,500	38,500	30,500
Cost	£8	£5	£100,000	—	300,000	175,000	164,000	192,500	244,000
Quarterly Totals	£100,000	£475,000	£356,500	£446,500	£1,378,000				

For the purpose of the example, closing stock is assumed to move evenly throughout the year. Payments in each quarter: one month arrears, two months current quarter.

Labour Cost Budget

Grade	1st Qtr.		2nd Qtr.		3rd Qtr.		4th Qtr.	
	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost
Grade 1 @ £2	82,000	164,000	16,000	32,000	28,000	56,000	16,000	32,000
2 @ £1	154,000	154,000	28,000	28,000	52,000	52,000	36,000	36,000
Totals	236,000	£318,000	44,000	£60,000	80,000	£108,000	52,000	£68,000
							60,000	£82,000

Labour availability budget

Grade		1	2
Weekly hours: 5 days @ 8 hrs.	40 hrs.		
Weeks in year	50		
Annual hours per employee	2000		
Employees: Grade A	40		
Grade B	80		
Total annual hours by grade		80,000	160,000
Less hours not available:			
2 hrs. per week per employee			
Idle time (50 weeks)	100 4,000		8,000
12 days per year per employee			
Sick etc (8 hrs.)			
96 hrs x 40 Staff	<u>3,840</u>	7,840	
x 80 Staff			7,680
			<u>15,680</u>
Hours actually available		<u>72,160</u>	<u>144,320</u>
Per quarter		<u>18,040</u>	<u>36,080</u>
Hours required	Units		
1st Qtr. Product A	5000 10,000		10,000
B	6000 <u>6,000</u>		<u>18,000</u>
		16,000	28,000
2nd Qtr. A	8000 16,000		16,000
B	12000 <u>12,000</u>		<u>36,000</u>
		28,000	52,000
3rd Qtr. A	3000 6,000		6,000
B	10000 <u>10,000</u>		<u>30,000</u>
		16,000	36,000
4th Qtr. A	7000 14,000		14,000
B	8000 <u>8,000</u>		<u>24,000</u>
		<u>22,000</u>	<u>38,000</u>
Total		<u>82,000</u>	<u>154,000</u>

This budget indicates that although available hours are exceeded in total it is only in the second quarter that the position is acute. The company will have to consider subcontracting the work and/or obtaining part-time staff. The short-fall in the 4th quarter could be overcome by overtime working to the extent of 2 hours per day grade A and ½ hour per day grade B.

Machine availability budget

Department				A	B
Weekly hours: 5 days @ 8 hrs.		40			
Weeks		50			
Annual hours per machine		2000			
Machines				10	36
Total annual hours				<u>20,000</u>	<u>72,000</u>
Less 10% Maintenance				<u>2,000</u>	<u>7,200</u>
Hours available				<u>18,000</u>	<u>64,800</u>
per quarter				4,500	16,200
Hours required					
		Units			
1st Qtr.	Product	A	5,000	2,500	5,000
		B	6,000	<u>3,000</u>	<u>6,000</u>
				5,500	11,000
2nd Qtr.	Product	A	8,000	4,000	8,000
		B	12,000	<u>6,000</u>	<u>12,000</u>
				10,000	20,000
3rd Qtr.	Product	A	3,000	1,500	3,000
		B	10,000	<u>5,000</u>	<u>10,000</u>
				6,500	13,000
4th Qtr.	Product	A	7,000	3,500	7,000
		B	8,000	<u>4,000</u>	<u>8,000</u>
				7,500	15,000
				<u>29,500</u>	<u>59,000</u>

The machine utilisation statement indicates the necessity for additional machines in department A as from the commencement of the year. The application is included in the capital expenditure budget. Due to the seasonal requirements management decision will be necessary as to minimum number of machines to be purchased and the extent to which machines will be hired in the second quarter. With regard to under-utilisation in department B, management will have to consider the possibility of hiring out or disposing of surplus machines and the need to purchase or hire machines in the second quarter.

Overhead Expenditure Budgets

<i>Factory</i>	<i>Total</i>	<i>1st Qtr.</i>	<i>2nd Qtr.</i>	<i>3rd Qtr.</i>	<i>4th Qtr.</i>	<i>Notes</i>
Rent and Rates	44,000	11,000	11,000	11,000	11,000	
Light and Heat	59,000	11,000	20,000	13,000	15,000	(A)
Insurance	58,800	14,700	14,700	14,700	14,700	
Repairs	51,600	12,900	12,900	12,900	12,900	
Salaries	112,100	20,900	38,000	24,700	28,500	(B)
Depn.						
Lease	7,000	1,750	1,750	1,750	1,750	
Plant	37,600	9,400	9,400	9,400	9,400	
Fittings	3,900	975	975	975	975	
	<u>374,000</u>	<u>82,625</u>	<u>108,725</u>	<u>88,425</u>	<u>94,225</u>	
<i>Admin.</i>	<i>Total</i>	<i>1st Qtr.</i>	<i>2nd Qtr.</i>	<i>3rd Qtr.</i>	<i>4th Qtr.</i>	<i>Notes</i>
Rent and Rates	26,000	6,500	6,500	6,500	6,500	
Light and Heat	14,800	5,500	1,850	1,850	5,600	(A)
Insurance	6,400	1,600	1,600	1,600	1,600	
Repairs	400		400			
Salaries	31,600	5,800	12,000	6,900	6,900	(B)
Interest	20,000	5,000	5,000	5,000	5,000	
Depn.						
Lease	1,000	250	250	250	250	
Fittings	1,800	450	450	450	450	
	<u>102,000</u>	<u>25,100</u>	<u>28,050</u>	<u>22,550</u>	<u>26,300</u>	
Factory	374,000					
Admin.	102,000					
Selling	216,200					
	<u>£692,200</u>					

<i>Selling</i>	<i>Total</i>	<i>1st Qtr.</i>	<i>2nd Qtr.</i>	<i>3rd Qtr.</i>	<i>4th Qtr.</i>	<i>Notes</i>
Rent and Rates	14,000	3,500	3,500	3,500	3,500	
Light and Heat	11,800	3,800	1,500	1,500	5,000	(A)
Transport	6,200	2,000	2,000	1,100	1,100	(D)
Insurance	2,700	675	675	675	675	
Repairs	1,000		1,000			(C)
Commission	25,200	8,100	7,800	3,900	5,400	(E)
Salaries	55,000	13,750	13,750	13,750	13,750	
Advertising	90,000	30,000	15,000	20,000	25,000	(F)
Depn.						
Lease	1,000	250	250	250	250	
Fittings	2,300	600	600	600	500	
Transport	7,000	1,750	1,750	1,750	1,750	
	£216,200	64,425	47,825	47,025	56,925	

Notes:

- (A) Light and Heat: Factory, apportioned in relation to production. Admin. and Selling, on variable quarterly basis.
- (B) Salaries: Factory, on basis of production giving rise to additional staff or overtime. Admin, on basis that part-time staff will be needed.
- (C) Repairs: charged to second quarter in view of minor amount involved.
- (D) Transport: apportioned on basis of sales; increase in customers gives rise to greater use of transport.
- (E) Commission: 1% on sales for quarter.
- (F) Advertising: charged on basis that cost incurred in quarter prior to sales; charge for 4th quarter in respect of sales following year.

Cash Budget

	Total	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Receipts:					
Sales – Cash	1,890,000	607,500	585,000	292,500	405,000
Credit, previous qtr.	380,000	50,000	135,000	130,000	65,000
this quarter	210,000	67,500	65,000	32,500	45,000
	<u>2,480,000</u>	<u>725,000</u>	<u>785,000</u>	<u>455,000</u>	<u>515,000</u>
Payments:					
Materials					
previous qtr.	389,600	80,000	33,000	158,000	118,600
this quarter	919,600	67,000	317,000	237,900	297,700
Labour	318,000	60,000	108,000	68,000	82,000
Salaries	198,700	40,450	63,750	45,350	49,150
Rent and Rates	84,000	21,000	21,000	21,000	21,000
Light and Heat	85,600	20,300	23,350	16,350	25,600
Insurance	67,900	67,900			
Repairs	53,000	12,900	14,300	12,900	12,900
Commission	25,200	8,100	7,800	3,900	5,400
Loan Interest	20,000	5,000	5,000	5,000	5,000
Transport	6,200	2,000	2,000	1,100	1,100
Advertising	90,000	30,000	15,000	20,000	25,000
Capital Expenditure	80,000	50,000	20,000	10,000	—
Dividends	87,000	58,000		29,000	
Taxation O/S 1 Jan. on dividend	130,000	130,000	24,000		
	<u>2,578,800</u>	<u>652,650</u>	<u>654,200</u>	<u>628,500</u>	<u>643,450</u>
Balance for Qtr.			130,800		128,450
Overdraft for Qtr.	98,800	72,350		173,500	
Balance b/f	130,000	130,000	202,350	333,150	159,650
Balance c/f	31,200	202,350	333,150	159,650	31,200

This budget draws attention to rapidly declining bank balance.

Materials – one-third of quarterly costs per material purchasing budget carried forward to next quarter. Salaries based on charges in accordance with departmental quarterly budgets.

For the purpose of demonstration no allowance has been made for outstanding expense creditors.

Balance Sheet as at 31 December

Fixed Assets	<i>Cost</i>	<i>Depreciation</i>	<i>Net</i>
Leaseholds	450,000	99,000	351,000
Plant	370,000	162,600	207,400
Fittings	106,000	62,000	44,000
Vehicles	35,000	22,000	13,000
	<u>961,000</u>	<u>345,600</u>	<u>615,400</u>
Current Assets			
Stocks: Finished Goods	608,000		
Raw Materials	98,000		
Debtors	90,000		
Prepaid Advertising	25,000		
Bank	<u>31,200</u>		
		852,200	
Current Liabilities			
Creditors	148,800		
Taxation	18,000		
Proposed dividend	<u>87,000</u>		
		<u>253,800</u>	<u>598,400</u>
			<u>1,213,800</u>
Share Capital			580,000
Retained profits			383,800
Debentures			250,000
			<u><u>£1,213,800</u></u>

Preparation of Cash Budget

The Balance Sheet of a company at 31 August is:

Share Capital	700,000	Plant at cost	600,000
Retained Profits	240,000	less depreciation	<u>264,000</u>
Trade Creditors	85,000		336,000
Accrued Charges			
Rent	8,000	Stocks: Raw Materials	115,000
Others	6,000	WIP and	
		Finished Goods	125,000
		Debtors	300,000
		Bank	163,000
	<u>1,039,000</u>		<u>1,039,000</u>

Creditors represent one month's purchases of raw materials.

Debtors represent two months' sales of £150,000 per month.

Future policy: Plant costing £200,000 to be purchased and paid for in September.

Raw Material consumption will be:

September	85,000
October	110,000
November	80,000
December	120,000

Stocks of raw materials to be increased to £130,000 at end of September and to £150,000 at end of November.

Expenses during the period will be:

	September	October/December (per month)
Direct Wages	16,000	24,000
Indirect Wages	5,000	7,000
Other factory expenses	3,000	5,000

One-quarter of the above expenses will be outstanding at the end of each month and will be paid in the following month.

Salaries	20,000	22,000
Office Expenses	2,000	3,000
Advertising	60,000	30,000 (Oct/Nov) 10,000 Dec

All the above will be paid in the month in which the expense is incurred.

Rent: £4,000 per month paid quarterly in arrears 30 September and 31 December.

Depreciation is calculated at £7,000 per month.

Forecast sales:

September	175,000
October	200,000
November	160,000
December	250,000

Work in progress and finished stock levels:

September	125,000
October	160,000
November	195,000
December	175,000

Existing credit terms will apply during the four months.

The Bank Overdraft is to be limited to £100,000 and the parent company will provide loan facilities on a monthly basis when the overdraft is likely to be exceeded.

A budgeted Manufacturing, Trading and Profit and Loss Account is required for the four months to 31 December, together with a forecast Balance Sheet as at that date. A cash forecast is also required for each month showing the monthly bank balance or overdraft and the extent to which loan facilities will be necessary.

Preliminary Workings for Cash Budget

	<i>Direct wages</i>		<i>Indirect wages</i>		<i>Factory Expenses</i>
Sept. $\frac{3}{4}$ of 16,000	£12,000	$\frac{3}{4}$ of 5,000	3,750	$\frac{3}{4}$ of 3,000	2,250
Accrual b/f	4,000	Accrual b/f	1,250	Accrual b/f	750
	<u>16,000</u>		<u>5,000</u>		<u>3,000</u>
Oct. $\frac{3}{4}$ of 24,000	18,000	$\frac{3}{4}$ of 7,000	5,250	$\frac{3}{4}$ of 5,000	3,750
Add accrual b/f	4,000	Accrual b/f	1,250	Accrual b/f	750
	<u>22,000</u>		<u>6,500</u>		<u>4,500</u>
Nov. $\frac{3}{4}$ of 24,000	18,000	$\frac{3}{4}$ of 7,000	5,250	$\frac{3}{4}$ of 5,000	3,750
Accrual b/f	6,000	Accrual b/f	1,750	Accrual b/f	1,250
	<u>24,000</u>		<u>7,000</u>		<u>5,000</u>
Dec. $\frac{3}{4}$ of 24,000	18,000	$\frac{3}{4}$ of 7,000	5,250	$\frac{3}{4}$ of 5,000	3,750
Accrual b/f	6,000	Accrual b/f	1,750	Accrual b/f	1,250
	<u>24,000</u>		<u>7,000</u>		<u>5,000</u>
Accruals c/f		Direct Wages: $\frac{1}{4}$ of 24,000	6,000		
		Indirect Wages: $\frac{1}{4}$ of 7,000	1,750		
		Factor x Expenses: $\frac{1}{4}$ 5,000	1,250		
			<u>9,000</u>		
Cost of material purchased:	Sept	Oct	Nov	Dec	Total
Raw materials used	85,000	110,000	80,000	120,000	395,000
Add Closing Stock	130,000	130,000	150,000	150,000	150,000
Less Opening Stock	115,000	130,000	130,000	150,000	115,000
\therefore Purchases	<u>100,000</u>	<u>110,000</u>	<u>100,000</u>	<u>120,000</u>	<u>430,000</u>

Budgeted Cash Account

	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	<i>Total.</i>
<i>Receipts</i>					
Debtors	150,000	150,000	175,000	200,000	675,000
Parent Co.			28,000	26,000	54,000
			<u>203,000</u>	<u>226,000</u>	<u>729,000</u>
<i>Payments</i>					
Creditors	85,000	100,000	110,000	100,000	395,000
Plant	200,000	—	—	—	200,000
Wages	21,000	28,500	31,000	31,000	111,500
Expenses	3,000	4,500	5,000	5,000	17,500
Salaries	20,000	22,000	22,000	22,000	86,000
Sundries	2,000	3,000	3,000	3,000	11,000
Advertising	60,000	30,000	30,000	10,000	130,000
Rent	12,000	—	—	12,000	24,000
	403,000	188,000	201,000	183,000	975,000
Balance for month (overdrawn)	(253,000)	(38,000)	2,000	43,000	(246,000)
Balance b/f	163,000	(90,000)	(128,000)	(126,000)	163,000
Balance c/f	(90,000)	(128,000)	(126,000)	(83,000)	(83,000)

Budgeted Manufacturing, Trading and Profit and Loss Account for the 4 Months to 31 December

	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	<i>Total.</i>
Sales	175,000	200,000	160,000	250,000	785,000
Raw Materials	85,000	110,000	80,000	120,000	395,000
Direct wages	16,000	24,000	24,000	24,000	88,000
Indirect wages	5,000	7,000	7,000	7,000	26,000
Factory expenses	3,000	5,000	5,000	5,000	18,000
Plant depreciation	7,000	7,000	7,000	7,000	28,000
Factory costs	116,000	153,000	123,000	163,000	555,000
Opening WIP	125,000	125,000	160,000	195,000	125,000
Closing WIP	(125,000)	(160,000)	(195,000)	(175,000)	(175,000)
Cost of production	116,000	118,000	88,000	183,000	505,000
Administration	22,000	25,000	25,000	25,000	97,000
Advertising	60,000	30,000	30,000	10,000	130,000
Rent	4,000	4,000	4,000	4,000	16,000
	202,000	177,000	147,000	222,000	748,000
Profit (loss)	(27,000)	23,000	13,000	28,000	37,000
	<u>175,000</u>	<u>200,000</u>	<u>160,000</u>	<u>250,000</u>	<u>785,000</u>

*Forecast Balance Sheet as at 31 December**Fixed Assets*

Plant at cost		800,000	
Less Depn.		<u>292,000</u>	
			508,000
Stocks and WIP		325,000	
Debtors		<u>410,000</u>	
		<u>735,000</u>	
Creditors	120000		
Accruals	9000		
Overdraft	<u>83000</u>		
		<u>212,000</u>	<u>523,000</u>
			<u>1,031,000</u>
			700,000
Capital			<u>277,000</u>
Retained Profits			977,000
			<u>54,000</u>
Loan			<u>1,031,000</u>

Questions

10.1 A clothing company manufactures ready-made clothing for men. They have considerable production problems due to fluctuating demand. Sometimes they find that they have too much stock of some items and not enough of others, and lose profits in consequence. It has been suggested to them that they would benefit considerably by installing a system of Budgetary Control. They invite you to prepare for them a Budgetary Control system to be brought into use the following year, and give you access to all their records and books of account.

Estimates of costs are prepared to enable the company to fix selling prices.

They have their own retail shops and do not sell through any other organisation.

The following information is based upon past records and historical costs:

Expected sales for next year:

<i>Product</i>	<i>Code no.</i>	<i>Selling</i>		<i>Quantity</i>			
		<i>Price</i>	<i>Jan–Mar.</i>	<i>Apr.–June</i>	<i>Jul–Sept.</i>	<i>Oct–Dec.</i>	
Suits, A Quality	1	£30.00	4,000	3,000	2,400	3,600	
Suits, B Quality	2	£23.00	5,000	5,400	3,800	4,800	
Overcoats, A Quality	3	£32.00	2,000	500	800	3,200	
Overcoats, B Quality	4	£24.00	3,200	800	1,000	5,000	
Summer Jackets	5	£15.25	1,000	5,000	10,000	500	
Summer Trousers	6	£ 8.45	1,200	6,000	11,000	800	

Unit Cost of Production

This is based upon the following estimates:

Product	Materials						Direct Labour	
	Cloth		Lining		Buttons		Hrs. @	Hrs. @
Code	Qty.	Price	Qty.	Price	Qty.	Price	Grade A	Grade B
1	3 yds	£6	1 yd.	£1.50	1 doz	20p	¼ 80p	1 60p
2	3 yrd	£4.50	1 yd.	£1.40	1 doz	20p	¼ 80p	1 60p
3	3 yds	£6.50	1 yd.	£1.50	½ doz	20p	½ 80p	5/6 60p
4	3 yds	£4.25	1 yd.	£1.43	½ doz	20p	½ 80p	5/6 60p
5	1½ yds	£6	½ yd.	£1.40	½ doz	20p	¼ 80p	3/4 60p
6	1 yd	£4.50	½ yd.	£1.60	½ doz	20p	1/8 80p	3/8 60p

Stocks: Opening stock for next year expected to be—

Raw Materials: Total Value, at cost, £20,000 (including Work in Progress, which is fairly small).

No change is expected in the closing stocks, so that purchases will equal estimated production.

Finished Goods: These are valued at the Factory Cost.

	Code	1	2	3	4	5	6
Opening Stock:		1,000	1,000	800	800	500	600
Closing Stock:		800	1,200	780	820	320	320

Production of each product has to be adjusted throughout the year to produce sufficient jackets and trousers in the summer, after which labour has to be employed more on overcoats for the winter.

Overheads: Factory Overheads are recovered by adding 100% to Direct Labour. Administration and Selling and Distribution Overheads are recovered together by adding 25% to Factory Cost.

<i>Machine Hours:</i>	Code	1	2	3	4	5	6
Sewing		½ hr.	½ hr.	¼ hr.	¼ hr.	12 mins.	12 mins.
Cutting		3 mins.	3 mins.	3 mins.	3 mins.	1 min	1 min

The factory works a 40-hr. week for 48 weeks a year.

There are 20 sewing machines and 3 cutting machines.

10% of the hours available is allowed for normal maintenance, cleaning and setting-up time,

8 men are engaged in the cutting department, but only 2 use the cutting machines and act as supervisors in the preparation and marking of the cloth for cutting.

There are 35 workers in the sewing, pressing and finishing department, of whom 6 are supervisors.

So there are 8 supervisors who are paid 80p an hour, while the rest are paid 60p an hour. These are all regarded as direct wages.

The overheads for next year are expected to be:

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	<i>Factory</i>	<i>Admin.</i>	<i>Selling</i>	<i>Distn.</i>
Rent and rates	4,000	1,000	3,000	1,000
Depreciation:				
Lease	4,200	1,600	800	400
Plant and Mach.	1,012	—	—	—
Fix. and Ftgs.	788	200	200	84
Motor Vans	—	—	—	1,516
Lighting and Heating	2,000	1,000	1,500	300
Debenture Interest	—	3,200	—	—
Power	2,500	—	—	—
Wages and Salaries	14,000	30,000	42,000	4,000
Insurance	400	200	1,500	400
Repairs	600	300	1,000	200
Commission (2%)	—	—	12,600	—
Misc. Expenses	500	3,300	2,400	260
Totals	<u>£30,000</u>	<u>£40,800</u>	<u>£65,000</u>	<u>£8,160</u>

During the following year it is proposed to buy a new motor van in January at a cost of £5,000, and 2 new sewing machines at £8000 each in April; new Office Equipment costing £4,000 in July.

Summarised Balance Sheet at the end of the current year

<i>Auth. and Issued Capital</i>		<i>Fixed Assets</i>	
100,000 Ord. £1 shares	100,000	Leasehold Premises	210,000
General Reserves	50,000	Less Depn.	<u>70,000</u> 140,000
Bal. on P. and L. a/c	9,500	Plant and Mach.	10,000
8% Debentures	40,000	Less Depn.	<u>3,000</u> 7,000
Future Taxation	22,500	Motor Vans	<u>6,080</u>
<i>Current Liabilities</i>		Less Depn.	1,200 4,880
Trade Creditors	32,400	Fix and Ftgs.	<u>16,760</u>
Accrued Expenses	3,700	Less Depn.	<u>3,760</u> 13,000
Current Taxation	14,500*		
Proposed Ord. Div.	<u>9,400</u> 60,000	<i>Current Assets.</i>	164,880
		Stock	50,120
* £7,900 due 1 Jan.		Debtors	56,000
£6,600 due 1 May		Cash	<u>11,000</u>
			117,120
	<u>£282,000</u>		<u>£282,000</u>

Notes: Half the sales are credit sales and the average time for payment is one month. Trade creditors and expense creditors are paid one month in arrears. (Expense crs. consist of all the overheads except depreciation, wages and salaries,

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(4) Factory costs will be:	Sept.	Oct/Dec.
Direct Wages	16,000	24,000
Indirect Wages	5,000	7,000 per month
Factory Overheads	3,000	5,000

One quarter of the above will be outstanding at the end of each month and will be paid in the following month.

(5) Rent at £6,000 per month is paid quarterly in arrears at 30 Sept and 31 Dec.

(6) Admin and selling expenses will be:

Salaries:	Sept. and Oct	20,000 per month	Nov/Dec.	22,000 per month
Advertising	Sept and Dec.	10,000 per month	Oct/Nov.	30,000 per month
Office				
Sundries	Sept and Dec.	12,000 per month	Oct/Nov.	13,000 per month

(7) Work in Progress and Finished Goods stocks are to be:

Oct. £260,000; Nov. £275,000; Dec. £175,000.

(8) Present credit terms will still apply.

(9) The parent company will advance by way of loan sufficient funds to maintain any required overdraft at a level of £300,000.

Prepare a cash forecast for the four months, showing balance at end of each month and a P and L a/c showing estimated results for the four months and a forecast Balance Sheet as at 31 Dec.

CHAPTER 11

Accounting for Costs

Trading organisations who are supplied with a finished product for resale are aware of the cost of the product and will know from market research, or have been informed by the manufacturer of a possible selling price. The trading company will be aware that in order to earn a profit its expenses must be maintained within the margin between cost and selling price.

The manufacturing company, however, having ascertained a possible selling price, knows that profit can be earned to the extent to which the costs of producing the product can be kept down.

Cost accounting thus becomes an essential requirement to any organisation supplying a finished product to a third party, and a system of costing would be used by the following:

- (1) Manufacturers – to ascertain the costs of alternative products.
- (2) Farmers – to ascertain the costs of alternative forms of livestock or crops.
- (3) Hoteliers – to ascertain the cost of providing service.
- (4) Transport operators – to ascertain the costs of providing alternative forms of transport.

All these organisations will require a costing system as an aid to management planning and control, in order that decisions as to number and variety of articles to be produced can be made.

The following are the distinctions between financial and cost accounting.

<i>Financial accounting</i>	<i>Cost accounting</i>
Is a legal necessity	No legal requirement
Shows the total result of a number of operations	Shows the result of each individual operation
Information basically historical	Attempts to forecast future results
Expenses analysed by type	Expenses analysed by departments
Indicates financial state of business, e.g. state of assets.	Indicates state of individual operations but is no indication of overall 'health' of company.
Used by all organisations	Used only by those providing a finished product or service.

The above comparison does not imply that where both financial and costing systems are in use in the same organisation it is necessary to maintain the information in two separate systems. Where the information can be integrated in one ledger this has the advantage of eliminating duplication of entries and avoids the necessity for reconciliation of profit indicated by the financial ledger and the profit shown by the costing ledger. Such differences usually arise from the fact that some administration expenses may not have been notified to the costing department and also from the manner in which the costing section deals with expenses.

Irrespective of the type of organisation, final costs are obtained in the same manner.

Direct Materials

Quantity and cost obtained from a material specification prepared by engineer, designer or chemist – a farmer will be aware of materials required to feed an animal for a given period.

Direct Labour

Type or grade and manner of carrying out operations obtained from a study of preparing samples by operators. Layout of work done in co-operation with work-study engineers and factory management.

Direct Expenses

Costs not arising in the actual production of a commodity but are an essential part of the marketing of the product, e.g. the Cellophane wrapping and carton for breakfast cereals, the royalty paid to authors.

These costs may arise either as a result of manufacture by the producer of the commodity or by obtaining supplies from an outside source or as a result of negotiation with the party concerned.

The costs summarised above will always be calculated on the basis of a single unit or such quantity as is considered economic, and once this cost is calculated it should not vary, irrespective of quantity produced.

Material cost will have been agreed with a supplier for a given quantity to meet anticipated production.

Labour costs will have been agreed, taking into account the agreed time required and the rate for a supply of a specific type of labour.

Overheads, the expenses of running the organisation, are however incurred in the operation of a number of departments or a variety of products. Management wishes to ensure that all potential customers are charged with a proportion of the expenses. There is however no satisfactory method for ensuring that all products are given an equitable charge for overheads. These will vary on a unit basis depending on levels of expenditure and production.

Costing information, even though it may come from a different source to financial information, is summarised and controlled through total accounts in exactly the same manner as financial information.

The distinction between financial and costing is shown as follows:

Income Statement

Sales	100,000
Cost of Goods sold	<u>68,000</u>
Gross Profit	32,000
Expenses	<u>22,000</u>
Profit	<u><u>£10,000</u></u>

Costing Statement

	A	B	C	Total
Sales	36,000	19,000	45,000	100,000
Factory Costs	32,000	13,000	25,000	70,000
Admin. Costs	<u>5,000</u>	<u>9,000</u>	<u>6,000</u>	<u>20,000</u>
	<u>37,000</u>	<u>22,000</u>	<u>31,000</u>	<u>90,000</u>
Profit (Loss)	<u>(1,000)</u>	<u>(3,000)</u>	<u>14,000</u>	<u>10,000</u>

Management now has a decision to make as to whether the loss leaders should not be produced or if an investigation is required into the manner in which products A and B are produced. Are the apparent losses the result of the manner in which the administration costs and possibly some part of the factory costs were apportioned to the various products?

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The estimate and eventually the cost of a product may be presented as follows:

Cost of Raw Materials (in accordance with stores requisitions or material specification)		250
Cost of Direct Labour (as per time cards or work study)		500
Direct Expenses (Royalty as per contract) (Carton as charged)		<u>350</u>
<i>Prime Costs</i>		1100
Variable expenses (Consumable stores, Power)	60	
Fixed Costs (Depreciation, Works Director's salary)	<u>150</u>	
Indirect factory costs		<u>210</u>
<i>Cost of Production</i>		1310
Office and Admin. Fixed costs, (Accountant's salary)		290
Selling and Distribution Variable costs (Commission)	20	
Fixed Costs (Sales Manager's salary)	60	<u>80</u>
<i>Total cost</i>		1680
Selling Price		<u>2000</u>
Profit 16%		<u><u>£320</u></u>

The fixed costs were charged on the agreed basis of:

Estimated total expenditure
<hr style="width: 100%;"/>
Estimated total production

If production of this product does not reach required level the expenses charged to customers will be less than actual expenses. Similarly if expenses exceed estimate and production is in accordance with estimate, the charge to customers will be less than expenses incurred.

Characteristics relating to stock and their valuation in various organisations.

<i>Retailer</i>	<i>Wholesaler</i>	<i>Manufacturer</i>
1. Finished goods only	Finished goods only	Raw materials, partly completed items, finished stocks.
2. Variety of stocks, many small commodities	Variety of items but probably in bulk	Large variety of components
3. Supplies from one wholesaler or number of manufacturers	Supplies from a variety of manufacturers	Supplies from a variety of sources
4. Will order as considered necessary or as a result of visit from a representative of wholesaler or manufacturer	Attempts to anticipate demand. Ensures supplies available when required by retailers	Has to arrange supplies in anticipation of production and production programme in anticipation of sales
5. Little or no attempt to maintain stock records. Stock at year end probably based on gross profit margin	Should have stock records; stores not difficult to control	Detailed stock records essential to control varying types and levels of items, and to ensure production flow
6. Cost of goods sold and stock valuation probably inaccurate	Little difficulty in ascertaining value of stock or cost of sales	<p>Little difficulty in ascertaining cost of raw materials used, and stock values; may have problems with materials at varying prices</p> <p>Requires a system of inspection for raw materials</p> <p>Stocks of partly finished goods necessary due to inability to complete production on a one-off basis</p> <p>Stocks of finished goods necessary to satisfy wholesalers and retailers</p> <p>Each stage will require stock records</p> <p>Costs readily identifiable</p>

Summary of Purchasing and Stores Procedure

Purchasing Procedure

Purchase requisition from individual requiring goods, or from storeman when stock reaches re-order level to purchasing department.

Quotations obtained from potential suppliers.

Order placed with successful tenderer taking into account quality, delivery, price, minimum order quantities.

Follow-up of supplier to ensure delivery dates maintained.

Arrange: inspection on receipt; transfer to stores or requisitioner; return to supplier of faulty goods.

Problems of Purchasing Department

Must consider: costs of initiating order; cost of storing; economic ordering levels; maximum/minimum stock levels; delivery time/production usage; delivery time by supplier and for customer; costs of stock holding; allocation of stock as between specific customers and general stock.

Stores Procedure

Receive goods from inwards inspection; arrange storage and up-date stock records; issue stores on authority of requisition and accept return of surplus stores – up-date records; notify purchasing department when stock at re-order level; carry out stock counts as required, or supervise stocktaker and adjust stock card balance where necessary.

Problems of Storing

The manufacturing system in operation – job/batch/process; disposition of plants – centralised system or several depots; variety of supplies, size and quantity, type of storage necessary; storage of specialist supplies – refrigeration, etc., fire risk.

Stock Card

This may contain quantity details only – financial record maintained by accounting office will then include value of stores.

<i>Date in Ref.</i>	<i>Qty.</i>	<i>Cost (£p)</i>	<i>Value (£p)</i>	<i>Out Ref.</i>	<i>Qty.</i>	<i>Cost (£p)</i>	<i>Value (£p)</i>	<i>Bal.</i>	<i>Cost (£p)</i>	<i>Value (£p)</i>
1/10	100	£1	£100					100	£1	£100
3/10	300	80p	240					400	85p	340
7/10	1000	85p	850					1400	85p	1190
13/10	1400	90p	1260					2800	87½p	2450
20/10					900	87½	787.50	1900		1662.50
27/10	1800	87½	1575					3700	87½	3237.50

Total of receipts will agree with entries in stores accounts and suppliers' invoices. Total of issues will agree with material requisition summaries. Value as shown will agree with balance on stores account.

The system is known as perpetual inventory, due to the fact that the balance at any one time can be seen immediately. It gives a control over stock levels and enables book stock and physical stock to be agreed without difficulty. Where differences arise at stocktaking the stock card must be adjusted and the financial value entered in the Stores Account and carried to the Stock Adjustment Account for subsequent transfer to final accounts.

The pricing method is known as 'the weighted average cost'. The quantity and value on hand is added to quantity and value of next delivery to give an average price.

Pricing of Stores

Generally, the storeman is not concerned with the order in which stores are used—items will be boxed and taken as requested without regard to the date of receipt. The accountant is concerned to take the cost of stores used from the Stores Account and will have to decide the order in which various prices are applied.

Methods

Average Price

This can be applied as the average of a number of different prices not yet fully utilised, or as the average price of all stocks in hand when a delivery is received at a price different to the previous price.

Problems

Numerous calculations are involved if deliveries are frequent and at varying prices. The average price may, however, be a reflection of the latest price if stocks move frequently, or if the latest purchase is large enough. It is possible for several issues to be priced at the same value, leading to uniformity in the costing of materials.

First in First Out (FIFO)

This is sometimes referred to as 'Price Queueing'. The oldest price at which stock was received is used in priority to all other prices. When all stocks at that price are utilised the next oldest stock price will be used.

Problems

Numerous calculations of individual issues may be involved if receipts are in small quantities. The stock balance will be at more than one price, but may bear a relationship to the most recent price.

Last in First Out (LIFO)

This is sometimes referred to as ‘Price By-Passing’. The latest price at which purchases are made is the first price to be utilised when stock used has to be priced. Earlier prices will only be used when later prices are exhausted.

Problems

This method is also likely to involve numerous calculations. The stock value will be at an out-of-date price. Customers bear the most recent charge. Both FIFO and LIFO have the disadvantage of no uniformity in costs charges; comparisons between similar jobs are made difficult. Under both methods the valuation of issues and stock is at actual cost.

Standard Price

This is a fictitious price – the price at which stock should be purchased. All usage is priced at the same value.

Problems

It avoids individual calculation. It is necessary to account for the difference between the actual price paid and the standard price. Stock will not be at cost or market value – this must be adjusted in accordance with the variance in the year. The system aids the preparation of preprinted bulk requisitions and is also an aid to controlling purchasing department efficiency.

Comparison of Pricing (see stock card, page 256)

<i>Stock Issued</i>	<i>FIFO</i>		<i>LIFO</i>
100 @ £1	100	—	
300 @ 80p	240	—	
500 @ 85p	425	—	
		900 @ 90p	810
900 Units consumed	£765		£810
Stock remaining		100 @ £1	100
		300 @ 80p	240
500 @ 85p	425	1000 @ 85p	850
1400 @ 90p	1260	500 @ 90p	450
1800 @ 87½p	1575	1800 @ 87½p	1575
3700 Units	£3260	3700	£3215

The method of stores pricing is a matter for the accounting policy of individual businesses and once decided should be adopted consistently. Irrespective of the stores pricing method adopted, the closing stock must be valued in accordance with recommended practice, i.e. the lower of cost or net realisable value, examining each individual item or group of items and not the stock in aggregate.

Accounting Entries

Stores Account

Cost of purchases of Raw Materials (As per Suppliers' invoices. Totals from invoice summaries)	XX	Cost of Returns to suppliers (As per invoices to Creditors. Totals from Summary sheets)	XX
Quantities taken into stock being entered on stock cards		Balances on Stock card will be reduced. (Unless goods returned prior to acceptance by stores)	
Stores previously issued to factory now returned as surplus to requirements. (At original cost – shown as receipt on stock card)	XX	Cost of Materials issued to factory for production (Totals as per summaries of Material Requisitions)	XX
Financial value of stock count surplus (Stock card balance increased)	XX	Financial value of stock losses (Stock card balance reduced)	XX
		Balance being value of stock in hand c/d (Will be agreed with value of stock in aggregate on stock cards)	XX
Balance b/d			

Creditors

Cost of goods returned	XXX	Cost of Supplies as per Invoices	XX
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Materials Used (Work in Progress)

Cost of Materials withdrawn from Stores for production	XX	Cost of Materials returned to Store	XX
		Value of Materials used in completed production transferred to Finished Stock	XX
		Balance – Materials still on Factory Floor – Work in Progress	XX

Stock Adjustment

Financial Value of stock losses	XX	Financial value of stock surpluses.	XX
Difference to Profit and Loss a/c		Difference to Profit and Loss a/c	

Salient features of Statement of Standard Accounting Practice No. 9

Valuation of Stocks and Work in Progress

Costs must be set against expected revenue. Any costs not recoverable in future years must be charged against current year's revenue.

Stocks

Compare cost and net realisable value of each item or groups of items not in total.

Costs to include any expenditure necessary to bring product up to required condition.

The problem of retailers – the inability to take stock or ascertain true cost; may use selling price less normal margin.

Net realisable value – the price which would give rise to neither profit nor loss on sale.

Replacement cost – only used if lower than net realisable value provided any loss which may arise is not excessive.

How to describe in final account – 'At the lower of cost or net realisable value', with a note as to the accounting policies used in arriving at the value stated.

Long-Term Contracts

Deferring profit until completion may distort accounts, which would show result of contracts completed and not of year's activities.

Profit to be taken in relation to proportion of contract completed, bearing in mind possible future liabilities.

Possible losses to be provided in full.

Can a profit be reasonably foreseen at end of contract?

Show as 'at cost plus attributable profits or less attributable losses and progress payments received and receivable'. Separate note required of amount of progress payments.

Terminology

Stocks and Work in Progress: assets purchased for resale; consumables; raw materials to be incorporated in resaleable products; items in varying stages of completion; finished items.

Cost of Purchase: purchase price, import duty, transport and handling. Trade discounts, rebates and subsidies can be deducted.

Cost of Conversion: direct materials, direct labour and direct expenses, sub-contract charges and production overheads.

Production Overheads: those charges relating to production as distinct from administration, selling and distribution charges.

Net realisable value: actual or estimated selling price less costs required to complete, and marketing and distribution costs.

Long-term contract: any contract where time required to complete will exceed one year.

Absorption of Overheads

Although the expenses of an organisation are incurred by every department within the organisation, these expenses can in fact only be recovered from customers through the efforts of the productive departments. Management may wish to allocate the expenses to departments, individuals or machines to ascertain the costs of running these departments or cost centres. The ultimate intention is to charge the expenses to production.

A preliminary step may well be the preparation of an expense distribution statement, where the expenses are apportioned or allocated to individual departments on an agreed basis.

The overheads are then transferred to production departments or products and a recovery rate calculated on one of the following bases: (1) overhead as a percentage of direct material; (2) overhead as a percentage of direct labour; (3) overhead as a cost per direct labour hour.

Where there is more than one productive department it is possible to have a different rate for each department calculated on a different basis.

The following information is required for the calculation of an overhead recovery rate:

Anticipated sales in units.

Direct labour and/or machine hours per unit.

Direct material cost per unit.

Direct labour cost per unit.

Overheads either in total for whole organisation or for each productive department.

<i>Department or Product</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>Total</i>
Anticipated Sales Units	<u>250,000</u>	<u>100,000</u>	<u>50,000</u>	—
Direct Labour Hours per unit	4	2	1	
Total hours	1,000,000	200,000	50,000	£1,250,000
Direct Material £ per unit	8	4	1	
Total Material cost	2,000,000	400,000	50,000	£2,450,000
Direct Labour £ per unit	4.80	2	2.625	
Total Labour cost	1,200,000	200,000	131,250	£1,531,250
Total Overheads				£6,125,000

Where material prices and labour rates increase they will have no effect on overheads. A recovery rate based on either of these methods will have an additional effect on cost, as a result of increasing overhead charge in addition to increases in direct costs.

Overhead recovery rates:

$$\frac{\text{Estimated expenditure } \pounds 6,125,000}{\text{Estimated direct labour hours } 1,250,000} = 4.90 \text{ per hr.}$$

$$\frac{\text{Estimated expenditure } \pounds 6,125,000}{\text{Estimated material cost } \pounds 2,450,000} = 250\%$$

or £2.50 charged for overheads for every £1 of materials.

$$\frac{\text{Estimated expenditure } \pounds 6,125,000}{\text{Estimated direct labour cost } \pounds 1,531,250} = 400\%$$

or £4 charged for overheads for every £1 of labour.

The cost of product A would appear as:

Direct Materials	4 tons @ £2 per ton	8
Direct Labour	4 hrs. @ £1.20 per hr	4.80
Overheads	4 hrs. @ £4.90	<u>19.60</u>
Total cost		32.40
Selling price (say)		<u>50.00</u>
Profit		<u>£17.60</u>

If the job requires longer than the estimated 4 hours, additional overheads will be charged thus reducing profit, where the selling price is fixed. Where a job exceeds the time anticipated the possibility is that more overheads are in fact incurred, e.g. additional power. It is therefore essential that these be recovered.

The cost of a job is estimated as follows:

Materials	5 tons @ £200 per ton	1,000
Labour	30 hrs. @ £5 per hr.	150
Overheads	@ 250% on Materials	<u>2,500</u>
		<u>£3,650</u>

If during the course of production the supplier increases his price by 25%, the position will be :

Materials	2 tons @ £200	400
	3 tons @ £250	<u>750</u>
		1,150 11½% Incr.
Labour	30 hrs. @ £5	150
Overheads	@ 250% on Materials	2,875 15% Incr.
		<u>£4,175</u>

Total cost has increased by 14% as a result of charging additional overheads, even though material price increases will not attract further overheads.

The business will have recovered additional overheads not represented by additional costs.

Similar considerations will apply if the overhead recovery rate is based on labour costs. A negotiated pay increase will not give rise to additional overheads.

Neither of the above systems will recover additional overheads arising as a result of the factory operating for more hours than expected or overhead costs being greater than budgeted costs, unless a review of the recovery rate is carried out periodically.

A recovery rate based on labour hours acknowledges that where a job takes more or less time than anticipated this may have some effect on total overheads as a result of (a) movements in factory hours affecting costs of power, light, heat, etc.; (b) additional supervision and clerical staff required; (c) changes in depreciation charges as a result of more or less operating time.

Considering the original example and assuming a 25% material and a 10% labour cost increase with recovery based on labour hours:

Estimate:	Materials		1,000	
	Labour		150	
	Overheads 30 hrs @ £4.90		147	
			<u>£1,297</u>	
				Increase on Estimate
Materials as previously			1,150	11½%
Labour	10 hrs. @ £5	50		
	24 hrs @ £5.50	<u>132</u>	182	21%
Overheads	34 hrs. @ £4.90		166.60	13%
			<u>£1,498.60</u>	

Total costs have increased by 16½% but overheads charge is only affected by the additional 4 hours, this accounting for 9% of the increase in costs. Other increases have not affected overhead charge.

The manner in which overheads are recovered is a matter for decision by the individual business, the main consideration being to ensure that all overheads are eventually charged to customers. An organisation may decide to ascertain the costs of a particular section or department; whilst some overheads will be directly attributable to the department other costs can only be apportioned and this will have to be done on an arbitrary basis, e.g. welfare services on the basis of number of employees. Where productive departments use the services of non-productive departments the extent of usage can only be estimated.

An organisation may also decide to separate overheads by type and apportion each on a different basis:

Factory Overheads:	$\frac{\text{Budgeted expenses}}{\text{Estimated hours}}$	= Rate per hour
Admin. Overheads:	$\frac{\text{Budgeted expenses}}{\text{Budgeted factory costs}}$	$\times 100 = \% \text{ of Factory cost}$
Advertising:	$\frac{\text{Budgeted expenses}}{\text{Budgeted sales revenue}}$	$\times 100 = \% \text{ per } \pounds 1 \text{ of Sales}$
Selling:	$\frac{\text{Budgeted expenses}}{\text{Budgeted sales revenue}}$	$\times 100 = \% \text{ per } \pounds 1 \text{ of Sales}$
Distribution:	$\frac{\text{Budgeted expenses}}{\text{Estimated total weight}}$	= $\pounds \text{ per ton carried}$

The cost estimate would appear as:

Materials	5 tons	1,000
Labour	30 hrs.	150
Factory Overheads	30 hrs. @ 25p	<u>7.50</u>
		1,157.50
Admin. Overheads	@ 200% of Factory Overheads	15.00
Advertising	5% of Selling Price	70.00
Selling	3% of Selling Price	42.00
Distribution	@ $\pounds 2.50$ per ton	<u>12.50</u>
		1,297.00
Profit		<u>103.00</u>
Selling Price		<u><u>$\pounds 1,400.00$</u></u>

Overheads amount to $\pounds 147$. Irrespective of method adopted for recovery the total overheads will remain the same.

Accounting for Overheads

Stage 1 – calculation of an overhead recovery rate for each productive department, based on estimated costs and production.

	<i>Department</i>	
	1	2
Estimated Overheads	18,000	16,000
Estimated Hours	900	1,000
Overhead Rate per hr.	$\pounds 20$	$\pounds 16$

Stage 2 – overhead expenditure as incurred charged to respective accounts and overhead recovered charged to Work in Progress as production proceeds.

Dr. Overhead Expense	}	Actual Expense
Cr. Creditors		
Dr. Work in Progress	}	Actual Recovery
Cr. Overhead Recovery		

Stage 3 – account for difference (the variance) between actual costs and recovery.

	<i>Department</i>			
	1		2	
Actual results:				
Expenditure		19,087		15,314
Hours	876		1033	
∴ Actual recovery @ £20	£20	<u>17,520</u>	@ £16	<u>16,528</u>
Variance		<u>(£1,567)</u>		<u>£1,214</u>

The under- and over-recovery has arisen as a result of (a) expenditure more than budget; (b) expenditure less than budget; (c) productive hours less than budget; (d) productive hours more than budget.

Reconciliation of Variance

	<i>Department</i>			
	1		2	
Budgeted Expenditure		18,000		16,000
Actual Expenditure		<u>19,087</u>		<u>15,314</u>
(Over)/Under Budget			(1,087)	686
Anticipated Hours		900		1,000
Actual Hours		<u>876</u>		<u>1,033</u>
Production Variance		24 hrs. @ £20		33 hrs. @ £16
Over/(Under) Recovery		(480)		528
		<u>£(1,567)</u>		<u>£ 1,214</u>

The method used for recording the costing information may depend on the type of business or the manner in which the management want the information to be presented.

The example below presents the information on the basis of (a) ascertaining the cost of individual containers, or (b) ascertaining the cost of a department or process.

Both methods employ the same documentation and total direct costs and overheads remain the same.

An account, or job, would be opened for each container to which the costs would be charged. A cost record is commenced for each job, even though the

same customer may be supplied with similar equipment at intervals. The cost of each job may vary due to (i) changes in material content and price; (ii) changes in type of labour and hourly rate; (iii) changes in work plan leading to variations in time.

The cost record may also cover the cost of a job involving a considerable number of units where these are repetitive, as in the light engineering industry. The job consisting of the manufacture of television sets in batches and costs will be collected for sections, or sub-assemblies, of a complete unit. The costs of the various sections are eventually collected together to ascertain the average cost of a unit.

Where the job is still in progress at the end of a financial period the balance on the account will be included among the current assets on the Balance Sheet. Profit will not be taken or cash received until the job is sold at the agreed price.

Where the job is of a long-term nature and payments are made in respect of completed sections of the job a calculation will be necessary indicating the profit to be transferred to the Profit and Loss Account.

Planning Ltd manufactures containers for a shipping agent and this involves three processes: frame building, cladding and painting. Being a small firm it does not manufacture containers unless it receives a specific order, which is then constructed as a one-off job.

The following was the Manufacturing Account of the business which was produced by the accountant.

*Manufacturing Statement for the
year ended 31 March*

Opening Stock of Raw Material				140
Purchases				1,160
				1,300
Less Closing Stock of Raw Materials				220
				1,080
Materials Consumed				1,080
Direct Labour				1,780
Prime Costs				2,860
Manufacturing Overheads				
Factory Rent and Rates	400			
Lighting and Heating	150			
Factory Insurance	50	600		
Depreciation: Building Dept.	100			
Cladding Dept.	70			
Spray Shop	130	300		
Administration of Production				
Wages	2,500			
General Expenses	3,600	6,100		7,000
Total Cost of Production				£9,860

The firm built 5 containers in the period under review and the jobs were numbered 20c, 21c, 22c, 23c, 24c. An analysis of the Materials showed:

<i>Job</i>	20c	21c	22c	23c	24c	<i>Total</i>
Frame Manufacture	50	60	70	80	60	320
Cladding	110	120	115	170	175	690
Spraying	10	16	13	19	12	70
	<u>170</u>	<u>196</u>	<u>198</u>	<u>269</u>	<u>247</u>	<u>1,080</u>

An analysis of the labour showed:

<i>Job</i>	20c	21c	22c	23c	24c	<i>Total</i>
Dept. Frame						
Manufacture	200	200	210	220	190	1,020
Cladding	120	130	135	115	110	610
Spraying	20	25	30	35	40	150
	<u>340</u>	<u>355</u>	<u>375</u>	<u>370</u>	<u>340</u>	<u>1,780</u>

The spray shop took up 20% of the floor space while the other two departments shared the remaining space equally. Administration expenses of production were considered to be shared equally by each department or by each container built. There was no Work in Progress at either the beginning or end of the period.

Product or Job Costing

<i>Job</i>	20c	21c	22c	23c	24c	<i>Total</i>
Materials						
Frame	50	60	70	80	60	
Cladding	110	120	115	170	175	
Paint	10	16	13	19	12	
	<u>170</u>	<u>196</u>	<u>198</u>	<u>269</u>	<u>247</u>	<u>1,080</u>
Labour						
Framing Dept.	200	200	210	220	190	
Cladding Dept.	120	130	135	115	110	
Spray Shop	20	25	30	35	40	
	<u>340</u>	<u>355</u>	<u>375</u>	<u>370</u>	<u>340</u>	<u>1,780</u>
Prime Cost	510	551	573	639	587	2,860
Overheads						
(Equally divided £7,000)	<u>1400</u>	<u>1400</u>	<u>1400</u>	<u>1400</u>	<u>1400</u>	<u>7,000</u>
Total Costs	<u>1910</u>	<u>1951</u>	<u>1973</u>	<u>2039</u>	<u>1987</u>	<u>9,860</u>

Process Costing

	<i>Frame Bldg.</i>	<i>Cladding</i>	<i>Spraying</i>	
Materials Consumed	320	690	70	1,080
Direct Labour	<u>1020</u>	<u>610</u>	<u>150</u>	<u>1,780</u>
Prime Cost	1340	1300	220	2,860
Factory Overheads				
Rent and Rates	160	160	80	
Electricity	60	60	30	
Insurance	<u>20</u>	<u>20</u>	<u>10</u>	
	240	240	120	600
Depreciation	100	70	130	300
Administration	<u>2033</u>	<u>2034</u>	<u>2033</u>	<u>6100</u>
	<u>3713</u>	<u>3644</u>	<u>2503</u>	<u>9,860</u>

Management are made aware of the costs of each process or department and will ascertain the average cost per container in each department as follows:

Frame Building Costs	<u>£3,713</u>	=	742.60
Frames	5		
Cladding Costs	<u>£3,644</u>	=	728.80
Frames	5		
Spraying Costs	<u>£2,503</u>	=	500.60
Frames	5		
Cost per unit			<u>£1,972.00</u>

This compares with costs varying between £1,910 and £2,039 under the job costing system, due mainly to the different method used for the allocation of overheads.

Costs of individual jobs will be summarised through a Works in Progress and when sold the cost is transferred to cost of production in order to calculate the profit.

Work in Progress

Material Summary	1,080	Cost of completed jobs	9,860
Labour Summary	1,780		
Overheads Summary	<u>7,000</u>	Balance c/d	<u>Nil</u>
	<u>9,860</u>		<u>9,860</u>
Balance b/d	Nil		

Balance will represent cost of uncompleted jobs at end of a financial period.

<i>Cost of Production</i>			
From Work in Progress	9,860	Sales	
Profit	927	4 Containers	8,800
	10,787	Balance	1,987
Balance b/d	1,987		10,787

The balance represents cost of container 24c remaining in stock.

The system of recording costs depends on the particular information management requires. Does it want to know the individual cost of each container constructed? Does it want to know the cost of individual processes?

If a job costing system is used management would be aware of variance in the total cost of identical containers. These variances will arise from:

(1) Price changes in materials and differing quality, leading to additional wastage.

(2) Labour rate changes and differing grades available to that budgeted for, leading to variances in time and total cost as a result of unskilled work.

(3) Accuracy of overhead absorption method. The overheads allocated to the individual jobs bear no relationship to time, material or labour costs.

Under process costing management is informed of the average cost of a complete unit and departmental costs. Production may be that a partly finished item is placed in store until facilities are available for the subsequent process to be carried out. Where management is in a position to sell partially completed units (e.g. an unsprayed container) the average costs will be known at the various stages. With process costing management is not informed or does not wish to know the actual cost of a complete unit.

Where a job extends beyond a financial period the business will have to consider the extent to which profits can be assumed to have been earned in the financial period in which part of the work was completed and invoiced; for example, where a building is partially completed the consulting engineer will certify the amount of such work which will be invoiced to the customer. The builder must now decide the amount of profit relating to the invoiced work which he can prudently take as profit in the financial period.

Even though a profit has been calculated the extent to which this can be used to meet dividends and loan interest will depend on the availability of cash. The builder will also have had to meet costs not yet invoiced in order to complete the work.

Accounting Procedure for Job Costing

Procedure. Estimate prepared – an attempt to find a profitable selling price: (1) material specification drawn up setting out components or raw materials required; (2) sample or plans examined to decide type and grade of labour

required and time needed to complete; (3) basis on which factory and administration overheads are to be charged to job is agreed.

Documents required. (1) Material requisition authorising withdrawal of components from store – unless components specially ordered in when charged direct to job; (2) time card for each operator working on job indicating time spent and cost in a particular financial period, usually weekly.

Material requisitions are priced by the cost office and summarised periodically, the total charge for materials for each job being charged to the account of the customer concerned:

Cr. Stores Control }
Dr. Work in Progress } Total value of all productive stores

The individual jobs will be charged with their respective portions of the total. Time cards are similarly priced and the total agreed with the payroll. Will be analysed by job as for materials:

Cr. Wages Control }
Dr. Work in Progress } Total value of all productive wages

The individual jobs will be charged with their respective portions of the total. No documents for charging of overheads. Each job is charged with its proportion at the agreed date as necessary, i.e. on completion of job:

Dr. Work in Progress }
Cr. Overhead Control } Total overheads to be charged for period

On completion of the job, the constituent parts of the account are totalled and the final cost ascertained, and a sales invoice completed charging the work to the customer – note that in certain instances the detail of the work done, with the job card, may be part of a set of forms and the invoice is completed as work carried out.

Material Requisition Summary W/E 31 March

<i>Reqn. No.</i>	<i>Job No.</i>	<i>Job No.</i>	<i>Job No.</i>	<i>Total</i>
	123	124	125	
0243	15			
0244	28			
0245		22		
0246	24			
0247			60	
0248		58		
0249	67			
0250			95	
	<u>£134</u>	<u>£80</u>	<u>£155</u>	<u>£369</u>

Labour Card Summary W/E 31 March

<i>Operator No.</i>	<i>Job No.</i>	<i>Job No.</i>	<i>Job No.</i>	<i>Total</i>
	123	124	125	
	Hrs. £	Hrs. £	Hrs. £	Hrs. £
638	6 8	20 25	18 22	44 55
644	8 12	10 12	34 20	52 44
690	15 20	18 26	11 15	44 61
	<u>29 40</u>	<u>48 63</u>	<u>63 57</u>	<u>140 160</u>

Accounting Entries

	Dr.	Cr.
Work in progress	369	
Raw Materials		369
Value of Stores issued per requisitions		
Wages Control (say)	253	
Bank (say)		253
Total of Wages Paid		
Work in Progress	160	
Wages Control		160
Cost of direct labour per job cards		
(Note that balance of wages will have been charged out to the respective overheads a/c's)		
Work in Progress	420	
Overheads Recovery		420
Value of recovery as per labour summary 140 hrs. at £3 per hr.		

The above totals are supported by the entries in the individual jobs (or accounts).

*Cost Record**Job No. 123**Customer:**Description of job:*

<i>W/E</i>	<i>Material</i>	<i>Labour</i>		<i>Overheads</i> <i>at £3 per hr.</i>
		<i>hrs.</i>		
31 March	134	29	40	87
7 April	68	75	128	225
	<u>£202</u>	<u>104</u>	<u>£168</u>	<u>£312</u>
	Estimate			Final Cost
	Materials	190		202
	Labour	175		168
	Overheads	<u>273</u>		<u>312</u>
		<u>£638</u>		<u>£682</u>

Final cost is greater than original estimate – investigate differences –
 Materials: quantities used greater than estimated – may be due to excessive waste or losses.

Supplier's prices increased or purchases made in small quantities.

Labour: Time taken longer than estimated, this may be due to use of different grade of labour. Cost reduced by using unskilled labour.

Overheads: Increased charge due to time factor – job required 104 hours compared with estimated 91. The result of using a different system of production to that originally intended.

The problem of profit-taking under long-term jobs may be summarised as follows:

Contract price	£18 m
Costs incurred to end of financial year	9 m
Costs estimated for next financial year	6 m
Work certified by surveyor and invoiced to customer	10 m
Cash paid by customer	8 m

The balance represents an amount held back by customer to meet contingencies which may arise between date of work being handed over and a specified period after work completed.

Profit calculations:

A			
	Costs to date	£9 m	
	Work invoiced	<u>10 m</u>	
	Profit		<u>£1 m</u>
B			
	Total costs	£15 m	
	Costs to date	9 m	
	Total profit (Selling price £18 m – Costs £15 m)	3 m	
	Profit 9/15ths =		<u>£1.8 m</u>
C			
	Work certified	£10 m	
	Work paid for, i.e. 80%	8 m	
	Profit 80% of £3 m		<u>£2.4 m</u>

The profits vary between £1 m and £2.4 m. The account for the job will have incurred cost of £9 m, whilst cash received from the customer is only £8 m. Dividend would have to be limited to other available funds.

Accounting procedure for Contract Job Costing

Prepare an account to which all costs of the contract will be charged. At the end of the financial year the value of stores, plant and work in progress on the site will be valued and credited to the contract. Any completed work which has been certified by the architect will be similarly credited to the contract, and an account opened in the name of the contractee, to which the value of the work certified will be charged.

The profit to date on the contract will be calculated and the necessary proportion taken to the Profit and Loss Account, the balance being treated as a reserve against possible future losses.

A construction company undertakes two contracts and the following are the details at the end of the financial year.

	<i>Contract No.</i>	
	350	351
Value of Contract	£400,000	£200,000
Date commenced	1 Jan.	1 Apr.
Work certified	£200,000	£150,000
Materials delivered	60,000	90,000
to site by suppliers from own store	10,500	8,000
Materials returned to suppliers	4,000	
Materials sold as scrap (cost £2,500)		3,000
Cost of Plant delivered to site	20,000	6,000
Wages	69,000	40,000
Site Expenses	6,000	7,000
Work not certified at year end	12,000	4,000
Stores on site at year end	4,500	1,500
Plant as valued	13,000	Nil
Retention	10%	10%

Administration expenses £31,500 are to be apportioned to the contracts on a time basis.

After providing a reserve equal to the amount retained by the contractees the company provides a further 25% before taking credit for any profit.

Contract No. 350

Description:	Value £400,000		
Materials:			
from suppliers	60,000	Materials returned	4,000
from store	10,500	Stores on hand c/d	4,500
Plant at cost	20,000	Plant as valued c/d	13,000
Wages	69,000	Work completed, not certified c/d	12,000
Site Expenses	6,000	Work certified	200,000
Administration Expenses	<u>18,000</u>		
	183,500		
Profit to date			
To Reserve	27,500		
To P and L.	<u>22,500</u>	50,000	
	<u>£233,500</u>		<u>£233,500</u>
Stores b/d	4,500	Profit Reserve b/d	27,500
Work in Progress b/d	12,000		
Plant b/d	13,000		

		Contractee		
Work Certified	200,000		Cash received	180,000
	<u>£200,000</u>		Balance c/d	<u>20,000</u>
				<u>£200,000</u>
Balance b/d	20,000			

Profit to date £50,000, less retention of £20,000, gives £30,000 from which is deducted 25% £7,500 to give a profit of £22,500.

Contract No. 351

Description	Value £200,000		
Materials:			
from suppliers	90,000	Materials sold – proceeds	3,000
from store	8,000	Stores on hand c/d	1,500
Plant at cost	6,000	Work completed not certified	4,000
Wages	40,000	Work certified	<u>150,000</u>
Site Expenses	7,000		158,500
Administration Expenses	<u>13,500</u>	Loss to date to Profit and Loss	21,500
	164,500		
Profit on sale of materials	<u>500</u>		
	165,000		
Reserve on retention money	<u>15,000</u>		
	<u>£180,000</u>		<u>£180,000</u>
Stores b/d	1,500	Profit reserve b/d	15,000
Work in Progress	4,000		

	Contractee		
Work Certified	150,000	Cash received	135,000
		Balance c/d	15,000
	<u>£150,000</u>		<u>£150,000</u>
Balance b/d	15,000		

The contract has incurred a loss to date of £6,500 to which must be added a reserve to cover the retention money of £15,000.

Any accrued charges outstanding at the end of the financial period must be included as part of the costs for the period under review, brought down on the contract and shown as current liabilities in the Balance Sheet. The balance on the contractee account must not be shown as a current asset; it may not be payable for a considerable time after the completion of the contract, but will be incorporated in the Work in Progress calculations:

	<i>No. 350</i>	<i>No. 351</i>
Balance on Contract	12,000	4,000
as Work in Progress		
Balance due by Contractee	<u>20,000</u>	<u>15,000</u>
	32,000	19,000
Less Reserve	<u>27,500</u>	<u>15,000</u>
Amount for Balance Sheet	<u>£4,500</u>	<u>£4,000</u>

Process Costing

This method of collecting costs arises where either (a) the material loses its identity in the course of production and in addition there is loss through evaporation, or (b) the job is such that more than one department may be involved in the final production and it is necessary that the costs of each department be identified, or (c) the item being produced is such that part-completed sections may be sold and it is therefore necessary to ascertain the cost at various stages in production.

The collection of costs operates in the same manner as for job costing – each process may be considered as a separate job. Materials are costed to process as required via the stores requisitions. Labour is charged in accordance with time cards. Overheads are charged on an agreed basis.

The major difference is that in process costing it is recognised that a loss in production is bound to arise and the cost of the loss is charged to saleable production, thus increasing the cost per unit.

Where standard losses can be set up, any difference between standard and actual loss is treated as a variance and charged to the Profit and Loss Account at the cost of production.

The system of process costing may be applied to brickmaking, chocolate manufacture, pottery, textiles, dairy products, paper making.

Accounting for costs:

<i>Process I</i>					
	Units	Costs		Units	Costs
Material	1,000	250	Transfer to		
Labour		750	Process II	1,000	2,500
Overhead		1,500	(Unit cost =		
			£2.50)		
	<u>1,000</u>	<u>£2,500</u>		<u>1,000</u>	<u>£2,500</u>
<i>Process II</i>					
	Units	Costs		Units	Costs
Transfer from			Transfer to		
Process I	1,000	2,500	Finished Goods		
			1,000	3,850	
Cost this process			(Unit cost = £3.85,		
Material		300	Process cost £1.35)		
Labour		700			
Overhead		350			
	<u>1,000</u>	<u>£3,850</u>		<u>1,000</u>	<u>£3,850</u>

If the product is saleable at the end of process I the producer has a cost on which to base his selling price.

Where production is lost, the cost is as follows:

Process I

	Units	Costs		Units	Costs
Costs as previously	1,000	2,500	Production to Process II	800	2,500
			Loss	200	—
	<u>1,000</u>	<u>£2,500</u>		<u>1,000</u>	<u>£2,500</u>

Process II

	Units	Costs		Units	Costs
Transfer from Process I	800	2,500	Production	700	3,850
Costs this process		1,350	Loss	100	—
	<u>800</u>	<u>£3,850</u>		<u>800</u>	<u>£3,850</u>

Where the loss or waste is recoverable and saleable as scrap, the proceeds will be used to reduce the cost of processing.

Assuming that waste from process I is saleable at 50p per unit and from process II at £1.10 per unit, the position is:

Process I

	Units	Costs		Units	Costs
Costs	1,000	2,500	Scrap value of units lost	200	100
			Production	800	2,400
	<u>1,000</u>	<u>£2,500</u>		<u>1,000</u>	<u>£2,500</u>

Process II

	Units	Costs		Units	Costs
From Process I	800	2,400	Scrap value of units lost	100	110
Costs this process		1,350	Production	700	3,640
	<u>800</u>	<u>£3,750</u>		<u>800</u>	<u>£3,750</u>

Where a standard loss is anticipated and production is then more or less than standard position is:

Process I

	Units	Costs		Units	Costs
Costs	1,000	2,500	Standard loss		
			20% at scrap		
			value of 50p	200	100
			Actual Production	750	2,250
			Variance –		
			Additional Loss	50	150
	<u>1,000</u>	<u>£2,500</u>		<u>1,000</u>	<u>£2,500</u>

Cost per unit £3 ($£2,500 - 100 \div 800$)
 \therefore Cost of 750 saleable units £2,250
 Cost of 50 lost units £150

The additional loss is a charge to Profit and Loss

Process II

	Units	Costs		Units	Costs
From Process I	750	2,250	Standard loss 20% at		
			scrap value of		
			£1.10	150	165
Costs this process		<u>1,350</u>	Actual production	660	3,778
	750	3,600			
Variance –					
Additional production.	60	343			
	<u>810</u>	<u>£3,943</u>		<u>810</u>	<u>£3,943</u>

$\frac{\text{Costs } £3,600 - 165}{\text{Production } 750 - 150} = \frac{£3435}{600}$
 Cost per unit = £5.725

\therefore Cost of 660 saleable units @ £5.725 = £3,778

Where there is a variance due to additional loss in production the waste will be sold at the usual rate, the revenue being offset against cost of producing the additional waste.

Where the variance is due to additional production the quantity of scrap available for sale is reduced, the balance between actual and anticipated sale being written off to the variance account.

*Scrap Account
(Standard Loss)*

Process I		Actual Sales:	
Anticipated Sales:		250 @ 50p	125
200 @ 50p	100		
Variance a/c	25		
Process II		Actual Sales:	
Anticipated Sales:		90 @ £1.10	99
150 @ £1.10	165	Variance	66
	<u>£290</u>		<u>£290</u>

*Variance Account (Adverse)
(Additional Losses in Production)*

Process I		Scrap Account	
Cost of Production	150	Profit and Loss a/c	125
	<u>£150</u>		<u>£150</u>

*Variance Account (Favourable)
(Additional Production)*

Scrap Account		Process II	
Profit and Loss a/c	66	Cost of Production	343
	277		
	<u>£343</u>		<u>£343</u>

Under a system of process costing it is not essential that each process automatically follows the previous process. The product of each process may well be completed units which are placed in store or refrigeration and the finished products then combined, as in chocolate manufacture where a variety of fillings are produced. The cost of each is ascertained and an assortment of the various fillings used to make a complete box. The percentage of each type making up the complete assortment is calculated on a standard basis.

A confectionery or chocolate manufacturer may undertake a variety of processes and the final cost of an assortment consists of a selection from the various processes.

The milk is preserved and stored in bulk, a quantity of cocoa butter is subsequently added to make the chocolate for covering, whilst at the same time a quantity of base cream is manufactured. A variety of centres are also prepared, e.g. orange, cream, caramel, strawberry cream. The costs of the processes are then collected and apportioned over a selection in the required proportions.

Similarly, in the electrical industry a complete unit may consist of a variety of kits which have been assembled as required. The cost of the individual kit or process is then collected to ascertain final cost of a complete unit.

The basic difference between the two processes is the absence of work in progress in chocolate-making and a variety of partly assembled kits in electrical engineering. Both organisations use basic processes or kits and complete the product with the specialist section.

In the case of confectionery all varieties require an outer covering of chocolate but the centres vary whilst in television manufacture, for example, the variation is in size of tube and cabinet. Other components are standard.

The type of costing system used by both organisations could be referred to as process, job or batch. Each section of the complete operation is a separate process, the job consisting of the manufacture of a quantity of cream or a number of kits and the cost being ascertained when the process or batch is completed.

Computation of costs

<i>Chocolate-making</i>		<i>Television manufacture</i>	
Process		Kit	
1. Preserved milk	14 per 100 lbs.	1. Speaker assembly	2.70
2. Chocolate-making	<u>6</u> per 100 lbs.	2. Power supply	1.20
Total to date	20		
3. *Caramel centre	<u>10</u> per 100 lbs.	3. Tube base	7.50
Total to date	30		
4. Amalgamate filling and coating (Labour only)	<u>2</u> per 100 lbs.	4. Control panel	2.50
Total of completed units	<u>£32</u> per 100 lbs.	5. Final assembly	50.10
			<u>£64.00</u>

*Note that the cost will vary according to the type of filling used.

Cost is the total of all kits as each unit requires the same components. An adjustment is only necessary in so far as the size of the unit is concerned.

The extent to which losses in production increase the final cost can be seen from brick production:

Bricks made	27 m	Material	£1 per	1,000
		Labour	£5 per	1,000
Bricks placed in kiln	26 m	Material		£39,000
		Labour		£104,000
Bricks drawn from kiln	25 m	Finished expenses		£31,000
Bricks unsaleable	1 m			

Cost Statement

			per 1000
Process I – Making			
Materials: Clay @ £1 per 1,000	27 m	27000	£1
Labour		<u>135,000</u>	<u>5</u>
Cost of Producing		162,000	6
∴ Cost of Waste			
1/27th of £162,000 = £6,000		<u> </u>	<u>.23</u>
Cost of Process I	26m	162,000	6.23
Process II – Firing			
Material		39,000	1.50
Labour		<u>104,000</u>	<u>4.00</u>
Cost of Firing		305,000	11.73
∴ Cost of Waste			
1/26th of £305,000 = £11.330		<u> </u>	<u>.47</u>
Cost of Processes I and II	25 m	305,000	12.20
Process III – Finishing			
Costs		<u>31,000</u>	<u>1.24</u>
Cost of Producing		336,000	13.44
∴ Cost of Waste			
1/25th of £336,000 = £13,444		<u> </u>	<u>.56</u>
<i>Final Cost</i>	24 m	<u>£336,000</u>	<u>£14.00</u>

If 27 m bricks had been produced the cost would have been £12.44 per 1,000 :

$$\frac{\underline{\underline{£336,000}}}{27,000}$$

Where a process is continuous and it is not possible to cease production due, for example, to the time required to obtain the necessary temperature, a decision must be made as to the method of valuing part-completed units, the work in progress, at the end of a financial period.

The problem arises from the fact that whilst materials for a given production at a standard rate are placed in the process and it is known how many completed units have been drawn out, so far as labour is concerned this has been employed in servicing all units and it is not possible to distinguish between time occupied on completed units and those partially completed. Similar considerations apply to the charging of overheads.

It is necessary, therefore, that a standard level of completion be adopted in respect of work in progress for each process, in order that labour and overheads can be apportioned to a specified number of complete units.

In period I work is commenced on 42,000 units and costs were: materials £10,500; labour £7,992; overheads £11,988.

During the period 30,000 units are transferred to process II and the remaining 12,000 units are 100% complete regarding materials but only 50% complete regarding labour and overheads.

<i>Process I (Period I)</i>			
	Units	Costs	Ref.
Materials	42,000	10,500	To Process II
Overheads		7,992	A 30,000
Labour		11,988	24,150
			Work in Progress
			B 12,000
			6,330
	<u>42,000</u>	<u>£30,480</u>	<u>42,000</u>
			<u>£30,480</u>

Materials will be applied evenly in respect of the 42,000 units either at commencement or during process, so that by the end of the period they are 100% complete. So far as Work in Progress is concerned these units are only partially completed and, due to the varying stages of completion, they are assumed to be, on average, 50% complete. The Work in Progress, therefore, represents 6,000 complete units in respect of Labour and Overheads.

<i>Calculations</i>			
	<i>Materials</i>	<i>Labour and Overheads</i>	<i>Total</i>
Costs	<u>£10,500</u>	<u>£19,980</u>	<u>£30,480</u>
Units:			
Finished	30,000	30,000	
Closing Work in Progress	<u>12,000</u>	50% <u>6,000</u>	
	<u>42,000</u>	<u>36,000</u>	
Per Unit	.25p	.555	

∴ Cost of complete units:			Ref.
Material	30,000 @ .25	7,500	
Labour and Overheads	30,000 @ .555	<u>16,650</u>	24,150 A
Cost of Work in Progress:			
Material	12,000 @ .25	3,000	
Labour and Overheads	6,000 @ .555	<u>3,330</u>	
		<u>6,330</u>	B
		<u>£30,480</u>	

In period II costs incurred are: material for 30,000 units £7,500; labour £6,018; overheads £12,002. 28,000 units are completed.

<i>Process I (Period II)</i>					
	Units	Costs		Ref. Units	Costs
Work in Progress	12,000		Transfer to Process II	C 28,000	24,080
Material		3,000			
Labour and Overheads		<u>3,330</u>			
		6,330	Work in Progress		
			D 14,000	7,770	
This period:					
Material	30,000	7,500			
Labour		6,018			
Overheads		<u>12,002</u>			
	<u>42,000</u>	<u>£31,850</u>		<u>42,000</u>	<u>£31,850</u>

The material for Work in Progress was added in period I. Material is added in this period for additional production.

Labour and Overheads is a charge for completing the opening Work in Progress, the manufacture of units commenced and completed in the period and the commencement of units uncompleted at the end of the period. It will therefore be necessary to calculate the number of units actually completed in the period:

Units transferred to Process II	28,000
Add units half-completed at end (50% of 14,000)	<u>7,000</u>
	35,000
Less units half completed at commencement (50% of 12,000)	<u>6,000</u>
Units fully completed in period	<u>29,000</u>

Calculations

	<i>Materials</i>		<i>Labour and Overheads</i>	<i>Total</i>
Costs:				
Opening Work in Progress	3,000		3,330	6,330
Period charges	7,500		18,020	25,520
	<u>£10,500</u>		<u>£21,350</u>	<u>£31,850</u>
Units:				
Opening Work in Progress	12,000	50%	6,000	
Period	30,000		29,000	
	<u>42,000</u>		<u>35,000</u>	
Per unit	= .25p		.61p	
∴ Cost of completed units:				
Material	28,000 @ .25p		7,000	Ref.
Labour and Overheads	28,000 @ 61p		<u>17,080</u>	
				24,080 C
Cost of Work in Progress:				
Material	14,000 @ .25p		3,500	
Labour and Overheads	7,000 @ .61p		<u>4,270</u>	
				7,770 D
				<u>£31,850</u>

So far as process II is concerned, costs in period I will consist of cost of completed units transferred from process I together with any costs required in process II. The Work in Progress will be valued on the agreed basis.

Period I – Work continued on 30,000 units transferred from process I and additional costs are: material £6,000; labour £2,860; overheads £4,570. 22,000 completed units were transferred to store and the Work in Progress was considered to be three-quarters complete.

<i>Process II (Period I)</i>					
	Units	Costs	Ref.	Units	Costs
To					
Transfer from Process I	30,000		Transfer to Store E	22,000	28,820
Material		*7,500			
Labour and Overheads		†16,650	Work in Progress F	8,000	8,760
		<u>24,150</u>			
This process					
Material		*6,000			
Labour		†2,860			
Overheads		†4,570			
	<u>30,000</u>	<u>£37,580</u>		<u>30,000</u>	<u>£37,580</u>

<i>Calculations</i>			
	<i>Material</i>	<i>Labour and Overheads</i>	<i>Total</i>
Costs	* <u>£13,500</u>	† <u>£24,080</u>	<u>£37,580</u>
Units:			
Finished	22,000	22,000	
Work in Progress	8,000	75% 6,000	
	<u>30,000</u>	<u>28,000</u>	
	= .45p	.86p	

∴ Cost of complete units:			Ref.
Materials	22,000 @ .45p	9,900	
Labour and Overheads	22,000 @ .86p	<u>18,920</u>	
			28,820 E
Cost of Work in Progress:			
Material	8,000 @ .45p	3,600	
Labour and Overheads	6,000 @ .86p	<u>5,160</u>	
			8,760 F
			<u>£37,580</u>

Period II – Costs for process II are: materials for 28,000 units £5,600; labour £2,090; overheads £4,480. 26,000 units are completed.

<i>Process II (Period II)</i>						
	Units	Costs		Ref.	Units	Costs
Opening Work in Progress	8,000		Transfer to Stock	G	26,000	34,060
Material		3,600				
Labour and Overheads		<u>5,160</u>				
		8,760	Work in Progress	H	10,000	10,950
Units from Process I						
Material		7,000				
Labour and Overheads		<u>17,080</u>				
This period						
Material		5,600				
Labour		2,090				
Overheads		<u>4,480</u>				
	<u>36,000</u>	<u>£45,010</u>			<u>36,000</u>	<u>£45,010</u>

As for process I in period II, the material for Work in Progress in process II at commencement of period II was added during period I. The material introduced in period II is for additional production. The labour and overhead charge covers the cost of completing Work in Progress units commenced and completed in the period and units commenced but in Work in Progress at the end of the period.

Units completed in period are:

Units transferred to Stock	26,000
Add units $\frac{3}{4}$ complete at end (75% of 10,000)	<u>7,500</u>
	33,500
Less units $\frac{3}{4}$ complete at commencement (75% of 8,000)	<u>6,000</u>
Units completed in period	<u>27,500</u>

Calculations

<i>Costs</i>	<i>Material</i>	<i>Labour Overhead</i>	<i>Total</i>
Opening Work in Progress	3,600	5,160	8,760
Period charges	<u>12,600</u>	<u>23,650</u>	<u>36,250</u>
	<u>£16,200</u>	<u>£28,810</u>	<u>£45,010</u>
Opening Work in Progress	8,000	75% 6,000	
Period	<u>28,000</u>	<u>27,500</u>	
	<u>36,000</u>	<u>33,500</u>	
=	.45p	.86p	
∴ Cost of completed units:			Ref.
Material	26,000 @ .45p	11,700	
Labour and Overhead	26,000 @ .86p	<u>22,360</u>	34,060 G
Cost of Work in Progress:			
Material	10,000 @ .45p	4,500	
Labour and Overheads	7,500 @ .86p	<u>6,450</u>	10,950 H
			<u>£45,010</u>

Where a process results in joint or by-products, consideration will have to be given to the manner in which costs are allocated to the various products. Joint products cover, for example, the varying cuts of meat from a single animal or varying grades of oil from a single barrel. By-products cover the saleable commodity resulting from an initial product, e.g. wood shavings as a result of cutting up timber.

Management may know the cost of a single animal – a decision has to be made as to how the cost is to be apportioned over the various saleable products.

The basic problem is: Does the revenue from the sale of the joint products exceed the total costs? If any additional costs are incurred in processing the joint product, is this covered by the revenue from the additional product?

The total costs of a process can be apportioned to the various products either on the basis of percentage of total weight of the individual products or on the basis of percentage of total sales revenue of each product.

Questions

11.1 From the following information draw up a statement to show (1) prime cost, (2) factory cost and (3) total cost, of one unit of each of products X and Y.

Departmental overheads are to be apportioned between products on the basis of Direct Wages. Selling, Distributive and Administrative expenses are to be apportioned on the basis of factory costs.

		<i>Production details</i>	
		X (£)	Y (£)
Direct Labour	8,000		7,200
Direct Materials	4,000		2,400
Direct Expenses	2,000		4,800
Departmental Overheads (£)			
Indirect Labour		4,800	
Indirect Materials		3,600	
Indirect Expenses		1,200	
Selling, Distribution and Admin. Overheads		7,600	
Units produced	X - 1,000		Y - 1,200

Calculate the selling price of (a) a unit of X and (b) a unit of Y, in order that a profit of one-seventh of the selling price is achieved in each case.

11.2 From the information given below prepare the accounts for jobs in progress at 1 January. Write up the cost cards for the week and close off the completed jobs. Show the entries in the Work in Progress Account.

Job Nos. 656 and 836 were invoiced to customers at £550 and £330, respectively:

Balances at 1 Jan:

	<i>Materials</i>	<i>Labour</i>
Job No. 631	35.90	8.70
656	185.50	57.80
793	40.50	14.90
819	12.35	2.25
836	120.00	26.40

Material Issues during week:

	<i>Component</i>	<i>Qty.</i>	<i>Price</i>
Job No. 656	1379	100	15p each.
793	1572	15	£1.15p each
656	1935	50	90p each
836	1275	80	85p each

Labour hours worked in week:

			<i>Job No.</i>				
<i>Employee</i>	<i>Hrs.</i>	<i>Rate</i>	631	656	793	819	836
Black	40	60p	10	4	6	12	8
Smith	36	80p	3	6	15	4	8
White	40	75p	6	8	5	5	16

Overheads are charged to jobs on completion at the rate of 120% of direct wages cost.

11.3 Special Containers Ltd designs and manufactures special-purpose containers for various industries. The company has been requested to submit quotations for supplying a specially designed container, to which the following data relate.

Design and development costs are estimated as follows:

- Design/Development Engineers' time – 11 hrs. @ £3 per hr.
- Draughtsman's time – 12 hrs. @ £1 per hr.
- Materials £18
- Engineering Machine Shop time – 15 hrs. @ £3.60 per hr.
- Project supervision £35
- General Overhead allocation £40.

The production machine which will be used for the manufacture of the containers requires 12 hours of an engineer's time (£1.80 per hour) for setting up and has an output of ten containers per hour; it will be used exclusively on the production of this type of container for eight hours per day, five days per week, until the order is completed.

Operatives are paid an hourly rate of £0.80 and overhead is absorbed by the application of an hourly rate of £1.25. The direct material cost per container is £0.20.

It is the company's practice to provide for a profit of 12½% on design and development costs, and 25% on production costs.

Calculate the price to be quoted per 100 containers for the supply of (a) 2,000 containers, and (b) 4,000 containers.

11.4 From the following particulars you are required to prepare a Process Cost Statement showing: (a) the cost of input material in total and per lb, and (b) the manufactured cost of final output in total and per unit.

Direct Materials:

In stock 1 July	Purchased during year	In stock 30 June
A 1,300 lbs. @ .25p per lb.	14,000 lbs @ .26p per lb.	1,450 lbs.
B 1,500 lbs. @ .20p per lb.	16,500 lbs. @ .225p per lb.	1,600 lbs.
C 1,175 lbs. @ .15p per lb.	12,500 lbs @ .17p per lb.	1,300 lbs.

Direct Labour:

Department 1	10,000 hrs. @ 50p per hr.
2	12,000 hrs. @ 55p per hr.
3	9,000 hrs. @ 47.5p per hr.

Production Overhead Absorption Rates:

Department 1	40p per hr.
2	35p per hr.
3	30p per hr.

The quantities used produce an output of 4,250 units. Units scrapped were sold for £10.75.

11.5 A company manufactures a standard unit which passes through three processes. From the following information prepare the Process Accounts.

	<i>Process 1</i>	<i>Process 2</i>	<i>Process 3</i>
Units entering process	6,000	5,500	5,450
Materials consumed	£3,000	£800	£500
Labour consumed	£1,500	£1,000	£1,000
Overhead	£755	£465	£571
Output – units	5,600	5,000	4,800

The units purchased for process I cost £7,000.

In calculating standard process cost, normal wastages in process, based upon the number of units introduced, is taken as follows: process 1, 5%; process 2, 10%; process 3, 10%.

Value of scrap is: process 1, £855; process 2, £890; process 3, £981.

There was no Work in Progress at any stage.

CHAPTER 12

Standard Costing

This is a method of costing which provides management with information on practically a day-to-day basis and overcomes the problems of historical costing whereby the results of a job are not known until completion. Although an investigation might be carried out into the reasons for the failure to meet the original estimate, such an investigation is too late to be of value so far as the completed job is concerned.

The system of historical costing may also lead to uneconomic prices being quoted, as the cost of one inefficient job may well form the basis for an estimate of a similar job in the future. There is also no basis on which to locate faults in the management system, e.g. inefficient buying of materials, inefficient use of personnel, inefficient use of factory facilities.

It is not denied that standard costing involves nothing more than the preparation of a series of detailed estimates but such estimates are prepared in a manner which enables management to determine differences, or variances as they are termed, prior to commencement of, and during the course of, production. Action can be taken to eliminate the fault at the point of occurrence and not on completion of the job. Losses can be minimised.

Standard costing provides the following: (1) distinction in increased costs of material as between market fluctuations and excessive factory usage; (2) distinction in changes in labour costs as between movements in rates and efficiency of labour; (3) distinction in changes in administration costs as between additional costs and efficient use of factory facilities.

The system also provides a control on departments. For example, the purchasing manager is given standards within which to purchase materials; the production manager is given standards within which to use materials; the personnel manager is given standards within which to remunerate personnel; the works foreman is given standards by which personnel should complete a task; departmental heads are given a budget within which their expenditure should be contained; factory departments are set production standards required to recover the anticipated overheads.

A system of standard costing leads to economies resulting from the integration of accounting records and eliminates the necessity for reconciliation of the costing and financial records.

The system may be introduced in stages, e.g. material control, labour efficiency, overheads. It serves the following purposes:

- (1) Facilitates control by management.
- (2) Segregates temporary rises or falls in costs and sales.
- (3) Provides management with regular statements of productions.
- (4) Enables authority to be delegated, costs being allocated on a departmental basis.
- (5) No necessity to provide terminal costs.

A standard is a predetermined figure based on experience and estimates and takes into account materials, wages, variable expenses and fixed expenses.

Standards may be varied in the light of history but this should not be done too frequently.

Management will be able to monitor whether (a) the best use is being made of materials; (b) the flow of work is satisfactory; (c) the plant is used efficiently. Management will also be able to ensure (d) that idle time is controlled; (e) that changes in production do not obscure price changes; (f) that costs are not distorted by production changes.

Setting of Standards

Materials – price, type and quantity. Engineers, designers and chemists decide the most efficient type, based on durability, availability and market prices. What quantity should be used, making a suitable allowance for waste? What price should be paid, making allowance for market variations? (In chocolate manufacture a recipe will be decided upon which will be the standard mix of ingredients.)

Labour – rate, grade and time. Work study will decide the form of labour after examination of the availability, facilities and current rates. What rate should be paid, allowing for wage negotiations? What time should be allowed, taking into account accepted losses?

Expenditure – costs and recovery. Departments, in conjunction with management, will prepare detailed budgets of future costs based on production and sales targets. What production is required to meet costs? What is the proportion of costs per unit?

Terminology

Standard: the predetermined basis, e.g. price to be paid, production required per hour.

Actual: the result obtained, e.g. price actually paid, production actually obtained.

Variance: the difference between the standard required and the actual result.

Types of Variance and Causes

Material Price: the difference between the standard price and the actual price, for a unit of the commodity.

Material Usage: the difference between standard quantity for a given production and the actual quantity.

Labour Rate: the difference between the standard rate for a unit of production and the actual rate.

Labour Efficiency: the difference between the standard time for a unit of production and the actual time.

Overhead Expenditure: the difference between the budgeted expenditure and the actual expenditure.

Overhead Volume: the difference between the budgeted recovery and the actual recovery on the actual production.

Price variance arises from: (1) use of substitutes; (2) purchase of small quantities; (3) purchase of bulk quantities, giving rise to discounts; (4) market price changes.

Usage variance arises from: (1) use of substitutes, leading to faulty workmanship; (2) inefficient control on the factory floor, giving rise to excessive waste; (3) use of improved quality material, giving more output.

Rate variance arises from: (1) changes in type of labour, e.g. skilled to semi-skilled; (2) operation of wage agreements.

Efficiency variances arises from: (1) improved use of factory plant; (2) use of substitutes; (3) changes in type of labour; (4) inefficient control of facilities.

Expenditure variance arises from: (1) services utilised not anticipated; (2) elimination of unnecessary services; (3) changes in costs.

Volume variance arises from: (1) factory efficiency or inefficiency; (2) changes in production methods, resulting in time difference; (3) shortfall in expected throughput of work, e.g. reduction of demand.

Variance Calculations

Material Price	}	Formula: Actual quantity bought at actual price compared with actual quantity at standard price.
Labour Rate		
Overhead Expenditure		
Material Usage	}	Formula: Actual quantity used at standard price compared with standard quantity used at standard price.
Labour Efficiency		
Overhead Volume		

Sub-divisions of volume variance

Capacity: Budgeted hours for budgeted output compared with actual hours used for actual output.

Efficiency: standard hours for actual output compared with actual hours for actual output.

Accounting for Variances

Materials – Price

The difference between standard price and actual price:

Standard Price	£80 per ton	Standard Price	£80 per ton
Actual Price	<u>£79 per ton</u>	Actual Price	<u>£83 per ton</u>
Variance	£1 per ton	Variance	£3 per ton
This is a favourable variance as a lower price has been paid than was anticipated		This is an adverse variance as a higher price was paid than was anticipated	

If 100 tons had been purchased at the two prices, entries would be:

<i>Stores</i>	<i>Stores</i>
100 tons @ £80 8,000	100 @ £80 8,000
<i>Supplier</i>	<i>Supplier</i>
100 @ £79 7,900	100 @ £83 8,300
<i>Material Price Variance</i>	<i>Material Price Variance</i>
100 @ £1 100	100 @ £3 300

The variance is segregated on receipt of supplier's invoice, although examination questions always require the calculation at the end of an accounting period in order to demonstrate the breakdown of the total variance into price and usage.

Combining the entries given would show:

<i>Stores</i>	<i>Creditors</i>
100 @ £80 8,000	100 @ £79 7,900
100 @ £80 8,000	100 @ £83 8,300
16,000	16,200
<i>Material Price Variance</i>	<i>Material Price Variance</i>
100 tons @ £3 300	100 tons @ £1 100
£300	Profit and Loss 200
	£300

An investigation can be carried out prior to issue of materials to job as to the reason for variance.

Material Usage

The difference between standard quantity and actual quantity.

<i>Favourable variance</i>		<i>Adverse variance</i>	
Standard Quantity	1 ton	Standard Quantity	1 ton
Actual Quantity	$\frac{3}{4}$	Actual Quantity	$1\frac{1}{8}$
Variance	$\frac{1}{4}$		$\frac{1}{8}$

Less material used than anticipated

More material used than anticipated

If the material for 40 units is withdrawn from Stores:

<i>Stores</i>		<i>Stores</i>	
Returns	40 tons @ £80 3,200		40 tons @ £80 3,200
10 tons @ 80 (40 units @ $\frac{1}{4}$ ton)			5 tons @ £80 (40 units @ $\frac{1}{8}$ ton) 400
<i>Work in Progress</i>		<i>Work in Progress</i>	
40 units @ 80 3,200		40 units @ 80 3,200	
<i>Material Usage Variance</i>		<i>Material Usage Variance</i>	
	10 tons @ £80 800		5 tons @ £80 400

The introduction of standards leads to the preparation of preprinted stores requisitions, indicating the standard quantities for given levels of production. The materials not required will be returned to stores; an additional requisition will be required to draw the extra material from stores.

Management will be aware when stores are withdrawn and the standard has been exceeded, and the necessary investigation may then be carried out.

Combining the entries would show:

<i>Stores</i>		<i>Work in Progress</i>	
Material Usage	40 tons	40 units	
Variance	@ £80 3,200	@ £80 3,200	
10 tons @ £80 800	40 tons	40 units	
	@ £80 3,200	@ £80 3,200	
	Material Usage Variance		
	5 tons		
	@ £80 400		

Material Usage Variance

Stores, 5 tons @ £80	400	Stores, 10 tons @ £80	800
Profit and Loss a/c	400		
	<u>£800</u>		<u>£800</u>

The work in progress represents the standard cost of materials for 80 units, 6,400 (1 ton per unit = 80 tons @ £80 per ton). If more or less units are produced a further variance will arise, representing the efficiency of production.

Labour rate

The difference between standard cost of labour per hour and the actual cost.

Favourable variance

Standard Rate per hr.	£2.00
Actual Rate per hr.	£1.80
Variance	<u>0.20</u>

If 300 hours are paid for the entries will be as follows:

Adverse variance

Standard Rate per hr.	£2.00
Actual Rate per hr.	£2.30
Variance	<u>0.30</u>

If 360 hours are paid for the entries will be as follows:

<i>Bank</i>	
	300 hrs. @ £1.80 540

<i>Bank</i>	
	360 hrs. @ £2.30 828

<i>Wages</i>	
Bank	540
Labour Rate Variance	
300 hrs. @ 20p	60

<i>Wages</i>	
Bank	828
Labour Rate Variance	
360 hrs. @ 30p	108

Labour Rate Variance

	Wages	60
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The £600 balance on Wages represents 300 actual hours at the standard rate of £2.

Labour Rate Variance

	Wages	108
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The £720 balance on Wages represents 360 actual hours at the standard rate of £2.

Labour efficiency

The difference between standard time per unit and actual time.

<i>Favourable variance</i>		<i>Adverse variance</i>	
Standard time per unit	8 hrs.	Standard time per unit	8 hrs.
Actual time per unit	<u>7½</u>	Actual time per unit	<u>9</u>
Variance	<u>½ hr.</u>		<u>1 hr.</u>

The 40 units being produced at 8 hours would give the following:

<i>Wages</i>			<i>Wages</i>		
b/f	600	Work in Progress	b/f	720	Work in Progress
Labour Efficiency Variance	40	320 hrs. @ £2 640	Labour Efficiency Variance	80	320 hrs. @ £2 640

<i>Work in Progress</i>			<i>Work in Progress</i>		
40 units			40 units		
@ £16	640		@ £16	640	
(8 hrs. @ £2)					

<i>Labour Efficiency Variance</i>			<i>Labour Efficiency Variance</i>		
		Wages 40			Wages 80
		(20 hrs. @ £2)			(40 hrs. @ £2)

Overheads

Variable Expenditure Variance

The difference between standard cost and actual cost. These costs include items which will not be incurred if the product is not produced or sold, e.g. royalty, commission and packaging. There may, however, be price changes not envisaged when the standard was set.

<i>Favourable variance</i>		<i>Adverse variance</i>	
Standard cost per unit	£1	Standard cost per unit	£1
Actual cost per unit	<u>£0.80</u>	Actual cost per unit	<u>£1.15</u>
Variance	<u>£0.20</u>		<u>£0.15</u>

The 40 units being produced give rise to the following entries:

<i>Variable Overheads</i>	<i>Variable Overheads</i>
40 units @ £1 40	40 units @ £1 40
<i>Supplier</i>	<i>Supplier</i>
	Charge 32 40 @ 80p
<i>Expenditure Variance</i>	<i>Expenditure Variance</i>
	40 units @ 20p 8
<i>Work in Progress</i>	<i>Work in Progress</i>
40 units @ £1 40	40 units @ £1 40
<i>Overhead Recovery</i>	<i>Overhead Recovery</i>
	Work in Progress 40

Note: Overheads have been entered at standard charge in the expense account. The variance was calculated on receipt of invoice.

Fixed Overheads

These can only be calculated on a unit basis as a result of estimating total expenditure and total production. Movements in either will affect the amount of overheads recovered.

Expenditure Variance

	<i>Favourable</i>		<i>Adverse</i>
Estimated expenditure	£200	Estimated expenditure	£400
Actual expenditure	170	Actual expenditure	440
Variance	£30		£40

<i>Fixed Overheads</i>	<i>Fixed Overheads</i>
Period 200	Period 400
Charge	Charge

<i>Creditors</i>	
Charge	170
<i>Expenditure Variance</i>	
	30

<i>Creditors</i>	
Charge	440
<i>Expenditure Variance</i>	
	40

Volume variance

The difference between overhead recovery on actual production at the standard rate and recovery on budgeted production

<i>Favourable variance</i>	
Budgeted production	25 units
Actual production	40 units
Variance	15 units
Budgeted overheads	£200
Budgeted overheads per unit	£8
(£200 ÷ 25 units)	

<i>Adverse variance</i>	
Budgeted production	50 units
Actual production	40 units
Variance	10 units
Budgeted overheads	£400
Budgeted overheads per unit	£8
(£400 ÷ 50 units)	

<i>Work in Progress</i>	
40 units	
@ £8	320

<i>Work in Progress</i>	
40 units	
@ £8	320

<i>Overhead Recovery</i>	
	Work in Progress
	320

<i>Overhead Recovery</i>	
	Work in Progress
	320

Note that Fixed Overheads were charged with £200. There has been additional recovery of £120 represented by the 15 units @ £8.

Note that Fixed Overheads were charged with £400. There has been a loss in recovery of £80 represented by 10 units @ £8.

No accounting entries are required for volume variance.

Final entries are as follows:

<i>Work in Progress</i>			
Materials, 80 units @ £80	6,400	Transfer to Finished Goods	8,400
Labour, 80 units @ £16	1,280		
Variable Overheads, 80 units @ £1	80		
Fixed Overheads, 80 units @ £8	640		
	<u>£8,400</u>		<u>£8,400</u>
<i>Finished Goods</i>			
80 units @ £105	8,400		

Sales variances

These arise either as a result of a change in selling price or sales volume.

Price variances

The selling price is more or less than the standard selling price.

<i>Favourable variance</i>		<i>Adverse variance</i>	
Standard selling price	£140	Standard Selling price	£140
Actual selling price	150	Actual selling price	120
Variance	<u>£10</u>	Variance	<u>£20</u>

If sales are 30 units, entries are as follows:

<i>Sales</i>		<i>Sales</i>	
	30 units at standard selling price of £140		30 units at standard selling price of £140
	4,200		4,200
<i>Debtors</i>		<i>Debtors</i>	
30 units @ £150	4,500	30 units @ £120	3,600
<i>Sales Price Variance</i>		<i>Sales Price Variance</i>	
	30 units @ £10		30 units @ £20
	300		600

Volume variance

The quantity sold is more or less than the standard.

<i>Favourable variance</i>		<i>Adverse variance</i>	
Budgeted sales	30 units	Budgeted sales	40 units
Actual sales	40 units	Actual sales	25 units
Variance	<u>10 units</u>	Variance	<u>15 units</u>

<i>Sales</i>	
Standard Sales 30 units @ £140	4,200

<i>Sales</i>	
Standard Sales 40 units @ £140	5,600

<i>Debtors</i>	
40 units @ £140	5,600

<i>Debtors</i>	
25 units @ £140	3,500

<i>Volume Variance</i>	
10 units @ £140	1,400

<i>Volume Variance</i>	
15 units @ £140	2,100

Both the price change and volume change affect the budgeted profit in that the increase in price represents additional profit, a price reduction giving rise to a loss of profit.

Additional sales give rise to additional profit, the difference between selling price and cost of the additional sales, a reduction in volume leading to a fall in profit:

Budgeted sales, 30 units @ £140	4,200	
Standard costs, 30 units @ £105	<u>3,150</u>	
Budgeted profit, 30 units @ £35		£1,050
Actual sales, 20 units @ £150	3,000	
Standard costs, 20 units @ £105	<u>2,100</u>	
Actual profit, 20 units @ £45		<u>900</u>
<i>Total Variance</i>		<u>£150</u>
Price variance, 20 units @ £10	200 Fav.	
Volume variance, 10 units @ £35	<u>350 Adv.</u>	
	<u>£150 Adv.</u>	

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On the basis of information presented, with budgeted sales of 70 units @ £140 and actual sales of 40 units @ £150 and 25 units @ £120, results would be presented in a report:

Budgeted sales	70 @ £140	9,800	
Standard cost	70 @ £105	<u>7,350</u>	
Budgeted profit			2,450

Variances

		Fav.	Adv.	
Sales price	40 @ £10	400		
	25 @ £20		500	
Volume	5 @ £35		<u>175</u>	
		<u>400</u>	<u>675</u>	275
				<u>£2,175</u>

Cost variances

Material price			200
usage	400		
Labour rate			48
efficiency			40

Variable overheads

Expenditure	2
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Fixed overheads

Expenditure		10
Volume	40	
	<u>442</u>	<u>298</u>
		<u>144 Fav.</u>

Actual Profit £2,319

The report prepared, indicating the variances, will outline the reasons for these in order that management will be in a position to take the necessary corrective action.

The following information relates to a process of a company employing a system of standard costing: The financial year is divided into 12 periods.

- Calculate the material cost variances, given:
 - Materials specified – 100 lbs. ½ in. Zinc Rod per 100 units
 - Price specified – 20p per lb.
 - Material issued against production order for 2,000 units – 24,000 lbs. at 17p per lb.
 - Actual output – 1,800 units

- (2) Calculate the labour cost variance, given:
 Standard time – 25 hrs. per 100 units
 Standard wage rate – 40p per hr.
 Actual wages paid – 480 hrs. at 43p per hr.
 Actual output – 1,800 units
- (3) Calculate the variable overhead variance, given:
 Budgeted variable overhead for year – £2,400
 Budgeted output for year – 24,000 units
 Budgeted rate per unit – 10p
 Actual variable overhead – £200
 Actual output – 1,800 units
- (4) Calculate the fixed overhead variance, given:
 Budgeted fixed overheads for year – £6,000
 Budgeted output – 24,000 units
 Standard time per unit – 15 minutes
 Actual hours worked and paid for – 480
 Actual fixed overhead – £530
 Actual output – 1,800 units
- (5) Using the information given in sections (1) – (4), together with the following additional information, prepare a statement suitable for presentation to management, reconciling the budgeted profit with the actual profit:
 Standard selling price – £1 per unit
 Budgeted sales – 2,000 units
 Actual sales – 1,800 units at £1.05 per unit.

Accounting Statement

	<i>Budget, 2,000 units</i>		<i>Actual, 1,800 units</i>	
Standard costs	Per unit	Total	Std. Costs	Actual Costs
Material, 1 lb. @ 20p	20p	400	360	2,000 lbs. @ 17 340.00
Labour, ¼ hr. @ 40p	10p	200	180	480 hrs. @ 43 206.40
Overheads				
Variable				
@ 10p	10p	200	180	200.00
£2,400 24,000 units				
Fixed				
@ 25p	25p	500	450	530.00
£6,000 24,000 units				
	65p	1,300	1,170	1,276.40
Selling price	£1.00	2,000	1,800	Actual sales 1,890.00
Budgeted profit	35p	£700	Std. profit £630	Actual profit £613.60

<i>Variances</i>				Ref.
Budgeted profit	700			
Actual profit	<u>613.60</u>	86.40	Adv.	(ii)
Budgeted sales	2,000.00			
Actual sales	<u>1,890.00</u>	110.00	Adv.	(iii)
Standard profit on actual sales	630.00			
Actual profit on actual sales	<u>613.60</u>	16.40	Adv.	(iv)
Standard costs of actual production	1,170.00			
Actual costs of actual production	<u>1,276.40</u>	106.40	Adv.	(i)

*Cost Variances, Ref. (i)***Material:**

Price	2,000 lbs. @ 3p (Std. 20p; Act. 17p)	60 F	
Usage	200 lbs. @ 20p (Std. 1,800 lbs; Act. 2,000)	<u>40 A</u>	20 F

Labour:

Rate	480 hrs. @ 3p (Std. 40p; Act. 43p)	14.40 A	
Efficiency	30 hrs. @ 40p (Std. 450 hrs.; Act. 480)	<u>12.00 A</u>	26.40 A

Overheads – Variable

Expenditure (Std. £180; Act. £200)		20.00 A
– Fixed		
Expenditure (Budgeted £500*; Act. 530)	30.00 A	
Volume (Budgeted £500; Act. 450†)	<u>50.00 A</u>	
		<u>80.00 A</u>
<i>Total Variance</i>		<u><u>£106.40 A</u></u>

Note:

Production 1,800 units
 Variable cost 10p per unit ∴ Std. £180
 *Fixed cost = £6,000 = £500 per period
 12 periods

†Fixed overheads only recovered on production: 1,800 units @ 25p.

Volume variance reconciliation

	Capacity: Budgeted hours	500	
	Actual hours	480	
			20 hrs. @ £1 £20 A
	(Fixed overheads 25p per unit, 4 units per hour = £1 per hour)		
	Efficiency: Standard hours for output	450	
	Actual hours	480	
			30 hrs. @ £1 £30 A
	Total Volume Variance		£50 A

Capacity variance represents loss of time due to idle time or machine break-down not budgeted for and is equivalent to 80 units (4 units per hour). Efficiency variance represents loss due to inefficient working. This is equivalent to 120 units:

Standard output for time taken (480 hours @ 4 units per hour)	1,920
Actual output	1,800
	120 units

Cost Variances 106.40

Profit Variance, Ref. (ii)

Price, 1,800 @ 5p (Std. £1; Act. £1.05)	90 F
Volume, 200 @ 35p (Std. £1; Std. Cost 65p)	70 A
	20.00 F
Variance between budgeted and actual profit	£86.40 A

Sales Variance, Ref. (iii)

Price, 1,800 @ 5p	90 F
Volume 200 @ £1	200 A
	£110.00 A

Cost variances	106.40 A
Selling price variance	90.00 F
Variance between standard profit and actual profit on actual sales Ref. (iv)	£16.40 A

The reconciliation of profit would be presented as follows:

<i>Budgeted Profit</i>			700.00
	<i>Variances</i>		
	Fav.	Adv.	
Profit – Sales price	90		
Sales volume		70	
Costs – Material price	60		
Material usage		40	
Labour rate		14.40	
efficiency		12.00	
Overheads – Variable expenditure		20.00	
Fixed expenditure		30.00	
Volume		50.00	
	£150	£236.40	86.40 A
<i>Actual Profit</i>			£613.60

Alternative presentation:

<i>Budgeted Sales</i>			2,000
	<i>Variances</i>		
	Fav.	Adv.	
Sales – price	90		
Volume	—	200	110
Actual sales			1,890
Standard cost of sales (1,800 @ 65p)			1,170
Standard profit on actual sales			720
Cost variances (as detailed above)			106.40
<i>Actual Profit</i>			£613.60

A company manufactures a product with a sales forecast of 160,000 units. The following standard costs have been agreed:

Material X 4 lbs. @ 10p per lb.		40p	
Y 2 lbs. @ 08p per lb.		16p	
Labour 1½ hrs. @ £2 per hr.		3.00	
Variable overhead		04p	
Fixed overhead £72,000		45p	
160,000 units			£4.05

Note that standards are arrived at as follows:

- Materials per specification on a unit basis
- Labour per work study on a unit basis
- Variable overheads at rate agreed on a unit basis

The above will remain the unit standards and will move in total in relation to production.

Fixed overheads per unit are arrived at on the basis of:

$$\frac{\text{Total estimated expenses}}{\text{Total estimated production}} = \text{Fixed overheads per unit}$$

The total cost may vary irrespective of production levels and will affect unit cost.

The financial year is divided into 10 periods. Actual results for period 1 were:

- Production 17,000 units
- Materials X 70,000 lbs. £6,300 Y 31,000 lbs. £3,350
- Labour 27,000 hrs. £48,600
- Variable overheads £850 Fixed overheads £6,600

Note standard requirements for production:

- Material X 17,000 units @ 4 lbs. 68,000 lbs.
- Y 17,000 units @ 2 lbs. 34,000 lbs.
- Labour 17,000 units @ 1½ hrs. 25,500 hrs.
- Variable overheads
17,000 units @ 04p £680

Variable overheads will show an expenditure variance only, as by their nature a charge will only be made when unit is sold. This was calculated on a unit basis as agreed between parties concerned.

Fixed overheads, however, are calculated on the basis of estimated expenses in relation to estimated production. Any change in volume will affect overheads recovered.

There is no necessity to calculate per lb. or per hr. costs to arrive at price variances.

<i>Calculations based on 17,000 units</i>	<i>Standard costs</i>	<i>Actual costs</i>	<i>Total variances</i>	
Materials X @ 4 lbs.	68,000 lbs.	70,000 lbs.	2,000 lbs.	A
Y @ 2 lbs.	34,000 lbs.	31,000 lbs.	3,000 lbs.	F
Labour @ 1½ hrs.	25,500 hrs.	27,000 hrs.	1,500 hrs.	F
Materials X @ 40p per unit	6,800	6,300	500	F
Y @ 16p per unit	2,720	3,350	630	A
Labour @ £3 per unit	51,000	48,600	2,400	F
Variable overheads @ 4p per unit	680	850	170	A
Fixed overheads @ 45p per unit	7,650	6,600	1,050	F
	<u>£68,850</u>	<u>£65,700</u>	<u>£ 3,150</u>	<u>F</u>

Reconciliation of Variances

Materials – Price

X Standard 70,000 lbs. @ 10p	7,000		
Actual 70,000 lbs.	<u>6,300</u>	700 F	
Y Standard 31,000 lbs. @ 8p	2,480		
Actual 31,000	<u>3,350</u>	<u>870 A</u>	170 A
– Usage			
X 2,000 lbs. @ 10p (Std. price)		200 A	
Y 3,000 lbs. @ 8p (Std. price)		<u>240 F</u>	<u>40 F</u>
			<u>£130 A</u>

The net variance of £130 can be summarised:			
X price	700		
usage	<u>200</u>	500	
Y price	870		
usage	<u>240</u>	<u>630</u>	
		<u>£130</u>	

Labour – Rate

Standard 27,000 hrs. @ £2	54,000		
Actual 27,000 hrs.	<u>48,600</u>	5,400 F	
– Efficiency			
1,500 hrs. @ £2 (Std. rate)		<u>3,000 A</u>	2,400 F

Variable overheads

– Price			
Standard 17,000 @ 4p	680		
Actual 17,000	<u>850</u>		170 A

Fixed overheads

– Expenditure			
Budgeted for period	7,200		
Actual for period	<u>6,600</u>	600 F	
– Volume			
Budgeted recovery for period (16,000 units @ 45p)	7,200		
Standard recovery for period (17,000 units @ 45p)	<u>7,650</u>	450 F	<u>1,050 F</u>

Total Variance £3,150 F

Capacity Variance:	Budgeted Hours for Budgeted Out- put 24,000 hrs. (16,000 units @ 1½ hrs)	Actual Hours for Output 27,000 (Represents 18,000 units)	Variance (£) 3,000 hrs. @ 30p (2000 units @ 45p)	900 F
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Overhead could have been recovered or an additional 2,000 units, in time, used.

Efficiency Variance:	Standard Time for actual output 25,500 hrs. (17,000 units @ 1½ hrs)	Actual Time for output 27,000 hrs. (18,000 units)	Variance (£) 1,500 hrs. @ 30p	450 A
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Overhead was only recovered on 17,000 units – it should have been recovered on 18,000 units in the time used. A loss of overhead on 1,000 units.

Volume Variance £450 F

Note:

Overheads were 45p per unit – at 1½ hrs. per unit this represents 30p per hr.

Budgeted variable overheads were	£680	
Budgeted fixed overheads were	<u>£7,200</u>	
Budgeted overheads	7,880	
Actual overheads	<u>7,450</u>	
Expenditure variance		430F
Budgeted recovery F.O. was (16,000 @ 45p)	£7,200	
Actual recovery F.O. was (17,000 @ 45p)	<u>7,650</u>	
Volume variance		<u>450F</u>
Total variance		<u>£880F</u>

The Profit and Loss Account was charged with actual overheads £7,450 and credited with overheads recovered £8,330, an over-recovery of £880.

Stores	
Std Cost X (a) 7,000	Std Issue X } WIP 6,800
Std Cost Y (b) 2,480	Std Issue Y } 2,720
Usage Var Y 240	Usage Var X 200
<u>£9,720</u>	<u>£9,720</u>

Creditors	
Act Cost X (a) 6,300	
Act Cost Y (b) 3,350	
	<u>9,650</u>
Act Var Costs 850	
Act Fixed Costs 6,600	
	<u>£17,100</u>

Material Usage Variance	
2,000 X @ 10p 200	3,000 Y @ 8p 240
P & L A/c 40	
<u>£240</u>	<u>£240</u>

Material Price Variance	
31,000 Y (b) 870	70,000 X (a) 700
	P & L a/c 170
<u>£870</u>	<u>£870</u>

Wages Control	
Cash Act 27,000 hrs 48,600	Std Cost @ £2 54,000
Rate Variance 5,400	
<u>£54,000</u>	<u>£54,000</u>

Wages Rate Variance	
P & L	27,000 hrs @ 20p
<u>£5,400</u>	<u>£5,400</u>

Direct Wages	
Std Cost of Act hrs 54,000	Std Cost of Std hrs } WIP 51,000
	Eff Var 3,000
<u>£54,000</u>	<u>£54,000</u>

Wages Efficiency Variance	
1,500 hrs @ £2	P & L
<u>£3,000</u>	<u>£3,000</u>

Work in Progress	
Std Mats 17,000 Units 9,520	Finished Goods 17,000 Units @ £4.05 68,850
Std Wages 25,500 hrs 51,000	
Var O'Hds 17,000 Units 680	
Fixed O'Hds 17,000 Units 7,650	
<u>£68,850</u>	<u>£68,850</u>

Overheads (various)	
Variable-Act 850	P & L 7,450
Fixed-Act 6,600	
<u>£7,450</u>	<u>£7,450</u>

Overhead Recovery	
P & L 8,330	W.I.P. Var. O'Hds 680
	Fixed O'Hds 7,650
<u>£8,330</u>	<u>£8,330</u>

Standard Costing Mix

Where a product requires a variety of materials in predetermined proportions, e.g. chocolate manufacture, it may be necessary to vary the mix due to seasonal fluctuations of a material, e.g. fresh milk when powdered milk must be used. These changes will give rise to more or less output and also affect the standard proportions of the various materials. It will become necessary to calculate, apart from the usual price and usage variances, the extent to which the usage variance was caused by the change of mix and the change in yield.

Assume that a product requires materials as follows:

A – 50 lbs @ 25p per lb.; B – 20 lbs. @ 20p per lb; C – 30 lbs. @ 50p per lb. and that it is intended to produce 100 batches. Standard loss is 10% which has no scrap value.

Actual results were: Materials, A – 5,200 lbs. @ 27½p; B – 2,075 @ 20p; C – 3,200 @ 48p. Production – 9,063 lbs.

Calculate the following variances: cost, price, usage, mix, yield.

(1) Set up standards based on actual output, i.e. original standard:

$$5,000 + 2,000 + 3,000 = 10,000 \text{ less } 10\% = 9,000$$

Actual Production 9,063

Therefore Standard quantities are:

$$\frac{9,063}{9,000} \times 5,000 = 5,035 \quad \frac{9,063}{9,000} \times 2,000 = 2,014 \quad \frac{9,063}{9,000} \times 3,000 = 3,021$$

on the basis that increased output gives rise to increased standard use.

(2) Cost the revised standard quantities at the standard prices and compare with actual cost after allowing for actual loss in production (total variance).

(3) Calculate the price variance in the usual manner, i.e. actual quantity at the difference between standard and actual price.

(4) Usage variance – the difference between revised standard and actual usage at standard price. This variance has come about partly as a result of change in the mix and loss or increase in yield.

(5) Mix variance – original standard quantity and actual quantity at standard price.

(6) Yield – the difference between standard and actual yield at standard price.

<i>Standard cost</i>		<i>Standard cost</i>		<i>Actual cost</i>	
<i>100 batches</i>		<i>(revised)</i>			
lbs.		lbs.		lbs.	
A 5,000 @ 25p	1,250	5,035 @ 25p	1,258.75	5,200 @ 27½p	1,430
B 2,000 @ 20p	400	2,014 @ 20p	402.80	2,070 @ 20p	414
C 3,000 @ 50p	1,500	3,021 @ 50p	1,510.50	3,200 @ 48p	1,536
	<u>10,000</u>		<u>10,070</u>		<u>10,470</u>
	1,000 10%		1,007 10%		1,047 10%
	–				360*
	<u>9,000</u>		<u>9,063</u>		<u>9,063</u>
	<u>£3,150</u>		<u>£3,172.05</u>		<u>£3,380</u>

= 35p per lb.

* Additional Loss

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Total cost Variance:	Standard	£3,172.05
	Actual	<u>3,380.00</u>

£207.95 Adv.

Material	A	C
Price Variance:		
Standard	25p	50p
Actual	<u>27½p</u>	<u>48p</u>
	<u>2½ Adv.</u>	<u>2p Fav.</u>

A 5,200 @ 2½p

£130 A

C 3,200 @ 2p

£64 F

66.00 Adv.

Usage Variance:

	A	B	C
	lbs.	lbs.	lbs.
Standard	5,035	2,014	3,021
Actual	<u>5,200</u>	<u>2,070</u>	<u>3,200</u>
	<u>165 A</u>	<u>56 A</u>	<u>179 A</u>

A 165 lbs. @ 25p

£41.25 Adv.

B 56 lbs. @ 20p

11.20 Adv.

C 179 lbs. @ 50p

89.50 Adv.

141.95 Adv.

£207.95

Mix Variance:

	A	B	C
	lbs.	lbs.	lbs.
Original Standard	5,000	2,000	3,000
Actual	<u>5,200</u>	<u>2,070</u>	<u>3,200</u>
	<u>200 A</u>	<u>70 A</u>	<u>200 A</u>

A 200 lbs. @ 25p

£50 Adv.

B 70 lbs. @ 20p

14 Adv.

C 200 lbs. @ 50p

100 Adv.

164.00 Adv.

Yield:

Standard

9,000 lbs.

Actual

9,063

63 Fav. @ 35p

22.05 Fav.

£141.95 Adv.

Questions

12.1 Distinguish clearly between wages rate variance and labour efficiency variance by defining each of these items. Give six reasons why such variances might arise and state briefly what corrective action might be taken in respect of each.

12.2 From the following information calculate labour rate and efficiency, and material usage and price variances:

Standards

Wage rate per hour	0.50p
Hours per unit	4 hrs.
Material used	2 lbs. per unit @ 0.75p per lb.

Actual results

Wages paid	£2,520
Hours worked	5,600
Material used	1,900 lbs.
Material cost	£1,750
Number of units produced	1,000

12.3 At the end of the second year, Planning Ltd had the following results. These were compared with the budget and differences were established. On investigation of cost both budgeted and actual quantities of material and hours worked were established.

	<i>Budget</i>	<i>20 units</i>	<i>Actual</i>	<i>20 units</i>
Materials				
Frames	1,408	70 cu.ft.	1,538	75 cu.ft.
Cladding	3,036	6,000 sq.ft.	2,936	5,900 sq.ft.
Paint	<u>308</u>	150 gal.	<u>418</u>	126 gal.
	4,752		4,892	
Labour				
Framing	1,530	3,000 hrs.	1,680	3,100 hrs.
Cladding	915	2,700 hrs.	805	2,400 hrs.
Spray shop	<u>225</u>	225 hrs.	<u>305</u>	200 hrs.
	2,670		2,790	
Factory Overhead	8,120		8,730	
	<u>£15,542</u>		<u>£16,412</u>	

Calculate the variances and discuss possible reasons and relationships between them.

12.4 A company prepared the following budgeted statement for a period:

Sales	40,000 units at £20 each		800,000
Cost of Goods Sold:			
Labour	200,000 hrs. @ £1	200,000	
Materials	80,000 lbs @ £3	240,000	
Variable Overhead	(55p per labour hour)	110,000	
Fixed Overhead	(25p per labour hour)	50,000	
			<u>600,000</u>
Gross Profit			<u>£200,000</u>

The actual results for the period were:

Sales	38,000 units at £21 each		798,000
Cost of Goods Sold:			
Labour	180,000 hrs. @ £1.025	184,500	
Materials	79,000 lbs @ £2.90	229,100	
Variable Overheads		102,000	
Fixed Overheads		48,500	
			<u>564,100</u>
Gross Profit			<u>£233,900</u>

Prepare a Statement reconciling the budgeted and actual profits.

CHAPTER 13

Marginal Costing

This is a method of costing which assumes, in the first place, that the difference, or margin, between direct costs and selling price is not profit but a contribution to the overheads and when these have been met the margin represented by any balance of sales is the contribution to profit. The system recognises the following principles:

- (1) Direct expenses are calculated on a unit basis and will vary in total according to output.
- (2) Selling price is also calculated on a unit basis; revenue will vary in total according to the volume of sales.
- (3) The margin, or contribution, will remain static per unit, but will vary in total according to changes in volume.
- (4) Overheads cannot be apportioned to units accurately, and where a variety of products is involved there is no known method of charging each product with an equitable portion of the overheads. Overheads tend to remain constant irrespective of output levels.
- (5) Direct expenses can be avoided, i.e. if no production no direct costs but if no production no revenue, therefore no contribution to overheads. The elimination of a product results in the remaining products having to bear a larger portion of the overheads.
- (6) If direct costs increase, the selling price must be similarly increased to obtain same total contribution. If the selling price cannot be increased then the volume must be increased. Similarly if the selling price has to be reduced direct costs must also be saved or volume increased.

The system enables management to know the levels of sales required for given levels of overhead and profit.

Operation of method

	<i>Unit cost</i>	<i>100 units</i>	<i>250 units</i>	<i>750 units</i>	<i>2000 units</i>
Material	4	400	1,000	3,000	8,000
Labour	<u>2</u>	<u>200</u>	<u>500</u>	<u>1,500</u>	<u>4,000</u>
Direct costs	6	600	1,500	4,500	12,000
Selling price	<u>10</u>	<u>1,000</u>	<u>2,500</u>	<u>7,500</u>	<u>20,000</u>
Margin or contribution	<u>£4 40%</u>	<u>£400</u>	<u>£1,000</u>	<u>£3,000</u>	<u>£8,000</u>

At all levels of sales, unit costs are £6 each and the contribution is 40% of revenue.

If overheads in total are £5,000 then output required will be:

$$\frac{\text{Overheads } \pounds 5,000}{\text{Contribution per unit } \pounds 4} = 1,250 \text{ units}$$

At this level profit will not have been earned; only overheads will be covered. The point in sales of 1,250 units is referred to as the 'Break-even Point', i.e. the point at which neither a profit has been earned nor a loss incurred.

Profit will accrue from the sale of 1,251 units onwards. If 2,000 units are sold profit will be £3,000 (750 units @ £4).

Total revenue and costs:

	<i>1,250 units</i>		<i>2,000 units</i>	
Sales @ £10		12,500		20,000
Materials @ £4	5,000		8,000	
Labour @ £2	<u>2,500</u>	<u>7,500</u>	<u>4,000</u>	<u>12,000</u>
Contribution		5,000		8,000
Fixed Overheads		<u>5,000</u>		<u>5,000</u>
Profit		<u>Nil</u>		<u>£3,000</u>

The contributions percentage may also be used to ascertain total sales revenue required to meet fixed overheads and a desired level of profit. For example,

Overheads	8,480	£16,000 represents an expected return of 10% on the capital employed in the business of £160,000
Profit required	<u>16,000</u>	
Total contribution required	<u>£24,480</u>	

If the total requirement represents 40% of sales revenue then this must be

$$\frac{\pounds 24,480 \times 100}{40} = \pounds 61,200$$

and if the company decides on a selling price of £12 a total output of 5,100 units (£61,200/12) will be required.

If a selling price of £10 must be maintained output must be 6,120 (£61,200/10) at which break-even point will be £8,480/£4 = 2,120 units. Selling price can be fixed after giving consideration to production capacity as well as demand at particular prices.

Calculations at a selling price of £10 would be:

	2,120 units		6,120 units	
Sales @ £10		21,200		61,200
Materials @ £4	8,480		24,480	
Labour @ £2	<u>4,240</u>		<u>12,240</u>	
		12,720		36,720
Contribution		8,480		24,480
Overheads		<u>8,480</u>		<u>8,480</u>
Profit		<u>Nil</u>		<u>£16,000</u>

Profit is represented by 4,000 units @ £4 each.

If material costs increase 15% and labour costs rise 30% whilst a contribution of 40% of selling price is still required, the price must be raised to £12, i.e.

Materials £4 + 15%	4.60	Contribution @ 40% of selling price
Labour £2 + 30%	<u>2.60</u>	is two-thirds of cost
	7.20	
Contribution two-thirds	<u>4.80</u>	Break-even point is now:
Selling price	<u>£12.00</u>	Overheads <u>£8,480</u> = 1,767 units
		Contribution <u>£4.80</u>

whilst an output of 5,100 units will be required to earn the desired profit, i.e.

$$\frac{\text{Overheads and Profit } \underline{\underline{£24,480}}}{\text{Contribution per unit } \underline{\underline{£4.80}}} = 5,100 \text{ units}$$

The lower break-even point and reduced output for required profit has arisen by virtue of the increased contribution per unit. If selling price is increased and a desired percentage contribution of selling price is required this gives rise to a greater contribution per unit. The effect of increasing selling price may well be to reduce sales. It will therefore be important to reach break-even point at an earlier stage in output.

If, after the increases in costs, the selling price is not increased, the position will be

Material	4.60	Contribution is now only 28%
Labour	<u>2.60</u>	Break-even point will be:
	7.20	Overheads <u>£8,480</u> = 3,029 units
Selling price	<u>10.00</u>	Contribution <u>£2.80</u>
Contribution	<u>£2.80</u>	

whilst to obtain a profit of £16,000 output must reach 8,743 units (£8,480 + £16,000/£2.80) and though the company may have a demand for the output, lack of facilities may prevent this figure being attained.

The *key factor* may be shortage of materials or labour or an inability to raise capital for additional plant.

In addition to changes in direct costs and selling price – the latter being adjusted to obtain the same unit contribution – there may also be increases in fixed costs. These will require higher levels of output to offset the increased overhead. A change in fixed overhead has no effect on contribution – this is only affected by changes in direct cost and selling price. Present position:

Material	4.60	If the fixed overheads are increased from £8,480 to £10,080, the break-even point will be
Labour	<u>2.60</u>	
	7.20	
Selling price	<u>10.00</u>	
Contribution	<u><u>£2.80</u></u>	

$$\frac{\text{£10,080}}{\text{£2.80}} = 3,600 \text{ units}$$

If this level of output cannot be attained, an alternative will be to raise the selling price in order to earn a higher contribution per unit. If this is raised to £10.35 the contribution is £3.15 and the break-even point will be:

$$\frac{\text{Overheads } \text{£10,080}}{\text{Contribution } \text{£3.15}} = 3,200 \text{ units}$$

The following example shows the effect of changes in direct costs and fixed overheads: Present position:

Sales (60,000 units @ £45)	2,700,000	Present contribution is 28% of selling price: £18 + £9 + £5.40 = £32.40 Selling price £45.00 ∴ Contribution = £12.60 Break-even point is
Materials @ £18	1,080,000	
Labour 9	540,000	
Direct Expenses 5.40	<u>324,000</u>	
	1,944,000	
Contribution	<u>756,000</u>	Overheads $\frac{\text{£226,800}}{\text{£12.60}} = 18,000$ units
Fixed Overheads	<u>226,800</u>	
Profit	<u><u>£529,200</u></u>	

The following changes will take place: material increase 10%; labour increase 10%; direct expenses increase 10p per unit.

Twelve salesmen at present on fixed contracts of £6,000 per annum will be paid a commission of 80p per unit and their contracts reduced to £1,500 per annum. Other economies will result in savings of £18,000. The company is unable to increase its selling price but wishes to earn the same level of profit as in the previous year.

Position will be:

Materials £18 + 10%	19.80
Labour £9 + 10%	9.90
Direct expenses 5.40 + 10p	5.50
Commission	<u>80</u>
	36.00
Selling price	<u>45.00</u>
Contribution	<u><u>£9.00</u></u>

The contribution is now only 20% of selling price due to increased variable cost and change from fixed cost to variable cost for sales commission

Fixed Overheads	226,800
Less Saving on Salaries	
12 @ £6,000	72,000
– 12 @ £1,500	<u>18,000</u>
Other savings	<u>18,000</u>
	72,000
Future fixed overheads	<u>154,800</u>
Profit required	<u>529,200</u>
Total contribution required	<u><u>£684,000</u></u>

The contribution required is 20% of revenue, therefore the revenue must be:

$$\frac{£684,000 \times 100\%}{20\%} = £3,420,000$$

at £45 per unit = 76,000 units

Break-even point will be:

$$\frac{\text{Overheads } £154,800}{\text{Contribution } £9} = 17,200 \text{ units}$$

Future results:

76,000 units

Sales @ £45		3,420,000
Materials @ £19.80	1,504,800	
Labour @ £9.90	752,400	
Direct Expenses £5.50	418,000	
Commission 80p	<u>60,800</u>	
		<u>2,736,000</u>
Contribution		684,000
Overheads		<u>154,800</u>
Profit		<u><u>£529,200</u></u>

Notes:

- (1) Output shows a 26.6% increase to obtain same profit.
- (2) Break-even point will be reached slightly earlier due to transfer of fixed costs to variable costs.
- (3) Greater output required to meet profit level due to lower unit contribution.
- (4) Salesmen's earnings under the previous scheme were £72,000. As a result of the change in method of remuneration they will earn £78,800:

Fixed Salary	18,000
Commission 76,000 @ 80p	60,800

They were, however, only required to sell 67,500 units to maintain their previous earnings.

Original fixed salary	72,000
New fixed salary	<u>18,000</u>

Commission to be earned £54,000 @ 80p = 67,500 units

the break-even point for sales staff. They were required to increase sales by 12½% merely to maintain earnings.

(5) The margin of output between total of 76,000 units and break-even point of 17,200 units is an improvement on the original margin of 60,000 units to 18,000 units. A larger fall in output can be sustained before break-even point is reached and fixed overheads not covered. This margin is referred to as the 'Margin of Safety'.

Marginal costing may also be used where two or more products are produced and, as a result of charging overheads by one of the arbitrary methods, one of the products appears to be incurring a loss or earning less profit, as a percentage of selling price, than other products.

The system is concerned with the margin between direct costs and selling price and the latter may have been fixed, taking into account what the market will bear or the company's inability to raise its price as a result of government intervention. The selling price thus bears no relationship to the manner in which the product was costed or the manner of overheads charged.

Similarly, product costs should be examined from the point of view of the contribution that each of the direct costs makes in order that when there is a shortage of material or labour, production can be concentrated on those commodities which give the greatest contribution in relation to the scarce commodity.

Product	A		B		C		
Units sold	50,000		40,000		25,000		
Hours per unit	3½		5½		8		
	<i>Cost</i>						<i>Total</i>
	<i>per unit</i>						
Material	12p	6,000	10p	4,000	20p	5,000	15,000
Labour	50p	25,000	37p	14,800	3.20	80,000	119,800
Variable expenses	25p	12,500	20p	8,000	1.00	25,000	45,500
Fixed expenses	70p	35,000	1.10	44,000	1.60	40,000	119,000
	1.57	78,500	1.77	70,800	6.00	150,000	299,300
Selling price	2.40	120,000	1.75	70,000	7.20	180,000	370,000
Profit (Loss)	83	£41,500	(0.2)	£(800)	1.20	£30,000	£70,700
%	34.6		—		16⅔		

Overheads have been charged on the basis of:

$$\frac{\text{Estimated expenditure } \pounds 119,000}{\text{Estimated hours } 595,000} = 20\text{p per hour}$$

If the above information is presented in marginal costing form the position is:

	A	B	C	
Material	6,000	4,000	5,000	
Labour	25,000	14,800	80,000	
Variable Overhead	<u>12,500</u>	<u>8,000</u>	<u>25,000</u>	
	43,500	26,800	110,000	
Sales	<u>120,000</u>	<u>70,000</u>	<u>180,000</u>	
Contribution	<u>£76,500</u>	<u>£43,200</u>	<u>£70,000</u>	189,700
Fixed Overheads				<u>119,000</u>
Profit				<u>£70,700</u>
Contribution % of Selling Price	63¾	61¾	38.8	

Product B is incurring an apparent loss as a result of time taken in conjunction with total output and selling price and is therefore bearing a higher charge for overheads. Product B gives a higher contribution than product C due to lower direct costs in relation to selling price. Production should be concentrated on product A, with product B given next priority; any other capacity is used for product C.

If a decision is to be made to cut back on product B the point must be made that a contribution of £43,200 towards fixed costs and profits will be lost. The position will be:

Contribution Product A	76,500
Contribution Product C	<u>70,000</u>
	146,500
Fixed Overheads	<u>119,000</u>
Profit	<u>£27,500</u>

The direct costs of product B have been avoided but at the same time contribution has been lost.

Although the order of greatest contribution is products A, C, B other key factors may have to be considered, such as material and labour availability together with time required. The total contribution per unit should be considered as a ratio of key factors.

Contribution on material and labour basis:

Product	A	B	C
Selling Price	2.40	1.75	7.20
Material	12p	10p	20p
Labour	50p	37p	3.20
Variable Overheads	<u>25p</u>	<u>20p</u>	<u>1.00</u>
	<u>87</u>	<u>67</u>	<u>4.40</u>
Contribution per unit	<u>1.53</u>	<u>1.08</u>	<u>2.80</u>
per £1 of material	£12.75	£10.8	£14
per £1 of labour	£ 3.06	£ 2.92	£ .875

If material is in short supply production should be concentrated on product C followed by A. If labour is the key factor then priority must be given to product A followed by B.

Comparison between Marginal costing and Absorption costing

Marginal costing ignores fixed overheads as part of production costs; they are a charge against the contribution and considered as expenses for the year in which they are incurred.

Absorption costing charges estimated fixed overheads against estimated production. Each unit bears a portion of the fixed costs. If a unit is not sold the cost is carried forward in the stock valuation; expenses are only charged against revenue in the year in which the sale arises.

The profit may differ depending on costing method adopted and the resulting stock valuation:

Sales	20,000 units @	£40
Variable costs		£16
Fixed Overheads		£600,000
Production		30,000 units

Marginal costing

Break-even point is:

$$\frac{\text{Fixed Costs } \pounds 600,000}{\text{Contribution } \pounds 24} = 25,000 \text{ units}$$
 (40 - £16)

A loss on 5,000 units not sold at a contribution of £24, £120,000 will arise.

Absorption costing

No break-even calculation
 Fixed overheads apportioned on basis of:

$$\frac{\text{Fixed Costs } \pounds 600,000}{\text{Production } 30,000} = \pounds 20 \text{ per unit}$$
 Costs are: Variable 16
 Fixed 20
 £36

Sales 20,000 @ £40	800,000	Sales 20,000 @ £40	800,000
Variable costs @ £16	<u>320,000</u>	Cost of Sales	
Contribution	480,000	20,000 @ £36	720,000
Fixed costs	<u>600,000</u>		
Loss	<u>£120,000</u>	Profit	<u>£80,000</u>

The closing stock of 10,000 units includes, under absorption costing, fixed costs of £20 per unit, £200,000 in total, the difference between loss and profit.

Under marginal costing, if unit production exceeds unit sales profit is reduced. Similarly if unit sales exceed unit production profit increases because total overhead is charged against total revenue.

Under absorption costing, if unit production is greater than unit sales profit increases, whilst if unit production is less than sales profit reduces because overheads are allocated to units produced and are charged against revenue only when units sold.

Year 1 Production	17,000 units	Sales 14,000 units
Year 2 Production	14,000 units	Sales 16,000 units
Selling price £50	Fixed overheads	£215,000 Factory 170,000,
Material £13 Labour £15		Selling 45,000
Factory Variable Overheads	£2	
Selling Variable Overheads	£3	

Year 1: Production 17,000 units

<i>Marginal costing</i>		<i>Absorption costing</i>	
Material @	£13 221,000	Material	221,000
Labour @	£15 255,000	Labour	255,000
Factory Variable @	£2 34,000	Factory Variable	34,000
Selling Variable @	£3 51,000	Selling Variable	51,000
	<u>£33 561,000</u>		<u>561,000</u>
		Factory Fixed Overheads	<u>170,000</u>
		@ £10	
Less Closing Stock			731,000
3,000 @ £33	<u>99,000</u>	Closing Stock 3,000 @ £43	<u>129,000</u>
Cost of Sales	462,000	Factory Costs	602,000
Sales 14,000 @ £50	<u>700,000</u>	Selling Fixed Overheads	<u>45,000</u>
Contribution	£238,000		647,000
Fixed Overheads	<u>215,000</u>	Sales	<u>700,000</u>
Profit	<u>£23,000</u>	Profit	<u>£53,000</u>

No fixed costs carried forward in stocks.

Closing stock includes £30,000 of fixed overheads: 3,000 units @ £10

Year 2: Production 14,000 units

Opening Stock	99,000	Opening Stock	129,000
Variable costs @ £33	462,000	Variable costs @ £33	462,000
	<u> </u>	Fixed costs @ £10	<u>140,000</u>
	561,000		731,000
Closing Stock		Closing Stock	
1,000 @ £33	<u>33,000</u>	1,000 @ £43	<u>43,000</u>
	528,000		688,000
Sales 16,000 @ £50	<u>800,000</u>	Selling Fixed Overheads	45,000
		Fixed cost under recovered	30,000
Contribution	272,000		763,000
Fixed Costs	<u>215,000</u>	Sales	<u>800,000</u>
Profit	<u>£57,000</u>	Profit	<u>£37,000</u>

Difference in opening stock	Year 2	30,000	greater
Difference in closing stock	Year 2	10,000	greater
Difference in profit	Year 2	<u>£20,000</u>	

In the two years profit under marginal costing is	95,000
In the two years profit under absorption costing	<u>105,000</u>
Difference is represented by closing stock of 1,000 units valued at £10	<u>£10,000</u>

In view of the under-recovery the fixed cost rate should have been £15.30, giving an increased stock value.

If variable selling costs are not considered part of manufacturing cost the value of closing stock is reduced accordingly but this would have no effect on the final profit.

Where a system of marginal costing is in operation, a firm preparing a tender will have to consider the extent to which the fixed overheads and profit have been met prior to accepting any further orders.

Two identical companies are preparing a sales quotation for 5,000 units based on:

	<i>Company A</i>	<i>Company B</i>
Maximum capacity	<u>25,000</u> units	<u>25,000</u> units
Present sales @ £10 per unit	10,000 units	20,000 units
Variable costs £6 per unit		
Contribution £4		
Fixed Overheads	35,000	35,000
Required profit	<u>15,000</u>	<u>15,000</u>
Contribution required	£50,000	£50,000
Break-even point for both companies was	12,500 units (£50,000/£4).	

At the present level of sales company A has earned a total contribution of £40,000 (10,000 units @ £4) compared with a required contribution of £50,000.

It will therefore have to quote a price of £8:

Variable cost	£6
<u>Contribution £10,000</u>	<u>£2</u>
5,000 units	<u>£8</u>

Company B, however, has already earned a contribution of £80,000 (20,000 units @ £4) compared with £50,000 required. It will therefore only need to quote a price sufficient to cover the variable costs, £6.

Company A will be able to accept orders for a further 10,000 units and any quantity of additional sales will enable them to reduce the price.

Company B now having reached maximum production will have to consider, before accepting further orders, the capital requirements of purchasing additional plant and the additional overheads which will be incurred, e.g. rent of warehouse, etc., which may increase in a greater ratio than to revenue.

Questions

13.1 The following is the summarised Trading Account of Stores Ltd for the year ended 31 September:

Stocks 1 Oct.	at cost	35,000	Sales	600,000
Purchases		<u>375,000</u>		
		410,000		
Stocks 31 Sept.	at cost	<u>30,000</u>		
Cost of Sales		380,000		
Gross profit		<u>220,000</u>		
		600,000		<u>600,000</u>
Variable Expenses		35,000	Gross profit	220,000
Fixed Expenses		125,000		
Net Profit		<u>60,000</u>		
		<u>£220,000</u>		<u>£220,000</u>

Mr Blore, the Managing Director of Stores Ltd, informs you that he expects the Fixed Expenses to increase by 10% during the following year and asks you which is the better method of avoiding a drop in the net profit, i.e. either (i) by maintaining the volume of sales with a 2½% increase in selling price or (ii) by maintaining the selling price with a 5% increase in volume.

Assuming that the variable expenses will alter only in relation to sales volume you are required to show the effect of each of these two suggested procedures, in the form of estimated Trading Accounts.

13.2 Present the following information to show clearly to management: (1) the marginal product cost and the contribution per unit, (2) the total contribution and profits resulting from each of the following sales mixtures.

	<i>Product</i>	<i>£ per unit</i>
Direct Materials	A	10
Direct Materials	B	9
Direct Wages	A	3
Direct Wages	B	2
Fixed Expenses	£800	
(variable expenses are allotted to products as 100% of direct wages)		
Sales Price	A	20
Sales Price	B	15
Sales Mixtures:		
(a) 100 units of product A and 200 of B		
(b) 150 units of product A and 150 of B		
(c) 200 units of product A and 100 of B		

13.3 Two businesses, A.B. Ltd and C.D. Ltd, sell the same type of product in the same type of market. Their budgeted Profit and Loss Accounts for the year ended 30 June, are as follows:

	<i>A.B. Ltd</i>		<i>C.D. Ltd</i>	
Sales		150,000		150,000
Less: Variable Costs	120,000		100,000	
Fixed Costs	<u>15,000</u>	<u>135,000</u>	<u>35,000</u>	<u>135,000</u>
Net Profit budgeted		<u>£15,000</u>		<u>£15,000</u>

You are required to: (a) calculate the break-even points of each business; (b) calculate the contribution ratio of each business; (c) calculate the sales volume at which each of the businesses will earn £5,000 profit; and (d) state which business is likely to earn greater profits in conditions of (i) heavy demand for the product and (ii) low demand for the product.

13.4 The following is the summarised trading account of a manufacturing firm which makes two products.

<i>Product</i>	1		2	<i>Total</i>
Sales		10,000	4,000	14,000
Less Cost of Sales:				
Direct Costs:				
Labour	3,000		1,000	
Materials	<u>1,500</u>	<u>4,500</u>	<u>1,000</u>	<u>6,500</u>
		5,500	2,000	7,500
Indirect Costs				
Variable Expenses		<u>2,000</u>	<u>1,000</u>	<u>3,000</u>
		3,500	1,000	4,500
Fixed Expenses		<u>1,250</u>	<u>1,250</u>	<u>2,500</u>
Net Profit/(Loss)		<u>£2,250</u>	<u>(£250)</u>	<u>£2,000</u>

The following proposals have been made by the board of directors for your consideration as financial adviser: (1) discontinue product 2; (2) as an alternative to (1) reduce the price of product 2 by 20% (it is estimated that the demand will then increase by 50 per cent); (3) double the price of product 1 (it is estimated that this will reduce the demand by three-fifths).

You are required to write a report to the board evaluating each of these three proposals and give your recommendations; include in your report computations which clearly show the effect of carrying out each proposal.

13.5 The A.B. Engineering Co. manufactures a single product which is sold through approved dealers.

The standard cost of the product is as follows:

Direct Material	9
Direct Labour	7
Variable factory overhead	4
Variable selling overhead	2

Production capacity is 60,000 per annum and market research suggests that this quantity could be sold.

Fixed costs have been budgeted for the forthcoming year as follows:

Production	80,100
Selling and Administration	63,300

A recent wage award is expected to increase the direct labour cost by 5% and to have a reflected effect in direct material and variable factory overhead costs of 2%. These increased costs have not been incorporated into the standard costs given above.

The company's fixed assets consist of:

Land and Buildings	135,000
Plant and Equipment	125,000
Fixtures and Fittings	40,000

and it is estimated that other capital employed, in the form of current assets, amounts to £10 per unit sold.

The company expects a return on capital employed of 20% before tax.

You are required to calculate the list selling price of the product, which will cover a dealership discount of 20% on list price and enable the company to achieve its profit objective.

CHAPTER 14

Published Accounts of Limited Companies

Section 148 of the Companies Act 1948 requires that every limited company shall present the shareholders with the Profit and Loss Account and Balance Sheet of the firm. Section 149 and that the accounts should give a true and fair view of the state of the company and of its profits. The exact minimum requirements of the Act are set out in the Second Schedule of the Companies Act 1967. In addition to the legal requirements the accountancy bodies have issued several statements of standard accounting practice which, although they have no legal standing, must be complied with.

The purpose of the legislation and the accounting standards is to present shareholders, creditors and potential investors with a basic minimum and consistent standard of information on the business. Many companies give more information than is legally required as they consider this to be of benefit to interested parties.

Every limited company has to file a copy of its annual accounts with the Registrar of Companies within 42 days of the Annual General Meeting. These accounts are available for inspection by any interested person.

Tables 14.1 – 14.3 set out the main publication details which must be shown in the accounts of a company not requiring consolidated accounts.

Table 14.1

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Auditors' Remuneration</i>	Para. 13	This should include expenses but not costs of other services, e.g. tax work or book-keeping.
<i>Comparative Figures</i> giving corresponding figures for the immediately preceding financial year for all items.	Para. 14(5) and Secs 10 & 11	Where a change in accounting layout or procedures has taken place it will be necessary to make similar amendments to the previous year's figures.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Depreciation</i>		
(a) Aggregate amount charged in the period.	Para. 12(1)(a)	No detailed breakdown into classes of assets depreciated need be shown.
(b) The method of providing it if other than by an annual charge based on the value of the assets.		
(c) The fact that it has not been provided for.	Para. 14(2)	
<i>Directors' Emoluments</i>		
(a) The aggregate amounts distinguishing between	1948 Act Sec. 196	
(i) fees as directors,		
(ii) other emoluments,		
(iii) pensions,		
(iv) compensation for loss of office.		
(b) Chairman's emoluments.	Sec. 6(1)(a)	For the period of office in the financial year.
(c) The number of directors in each band of £2,500 salary.	Sec. 6(1)(b)	Applicable only to duties substantially performed in U.K.
(d) The emoluments of the highest paid director if this is greater than the emoluments of the Chairman.	Sec. 6(2)	Exemption from disclosure is given where the aggregate paid to directors is under £15,000. (Sec. 6(6) covers points (b) – (e).)
(e) The total emoluments waived and the number of directors involved.	Sec. 7	
<i>Dividends</i>		
The aggregate amount of dividends paid and proposed.	Para. 12(1)(h)	The Directors' Report will show the rate per share.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Employees</i>		
The number earning over £10,000 shown in bands of £2,500.	Sec. 8	U.K. employees only.
<i>Exceptional Items</i>	Para. 14(6)	
Details of material amounts caused by		These items would not normally be incurred in the usual course of the business, e.g.
(a) Changes in accounting basis.		Gains/Losses on Sale of Fixed Assets
(b) Exceptional non-recurrent transactions.		Gains/Losses on Currency changes
(c) Amounts arising from previous year's occurrences where not included elsewhere.	Para. 12A	Gains/Losses on Investments, S.S.A.P. 6 gives details of the method of presentations. Particularly such items as adjustments for alterations in previously created taxation provisions or losses arising through previous events, e.g. fines or foreign government sequestrations.
<i>Hire Charges</i>	Para. 12(1)(gb)	
Amounts charged for the hire of plant and machinery – where material.		This charge can be compared with the depreciation charge borne by companies owning their plant and is an indication of capital investment policy.
<i>Interest Payable</i>		
The amounts payable on	Para. 12(1)(b)	Debenture interest will be shown under (c) until such time as the repayment date falls within 5 years when it will appear under (b).
(a) Bank loans and overdrafts.		
(b) Loans repayable within 5 years.		
(i) by instalments,		
(ii) other than by instalments.		
(c) Loans repayable after 5 years.		

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Investment Income</i>		
The amount of income from (a) Quoted investments. (b) Unquoted investments.	Para. 12(1)(g)	These details are usually shown in conjunction with the Balance Sheet disclosures on Investments.
<i>Rent Receivable</i>		
The net income from rent, where this is a substantial part of the company's income.	Para. 12(1)(ga)	This is a similar item to the turnover of a trading company.
<i>Reserves – Transfers</i>		
(a) Amounts provided for the redemption of (i) Share Capital, (ii) Loans	Para. 12(1)(d)	The substance of these paragraphs, together with those relating to the Balance Sheet, results in all movements on any reserve being shown.
(b) Amounts transferred to and from reserve.	Para. 12(1)(e)	
(c) Amounts transferred to and from provisions which have not been used for the specific purpose for which they were set aside.	Para. 12(1)(f)	
<i>Taxation</i>		
The amount provided for UK Corporation Tax showing (a) The basis of the calculation which normally would include the rate used. (b) The amount of overseas taxation on profits and capital gains.	Para. 12(1)(c) Para. 14(3) Para. 12(1)(c)	S.S.A.P. 6 give details of the treatment of the Advanced Corporation Tax system.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
(c) Provision for future taxation. Any special circumstances which affect the charge in the financial year or which will affect it in succeeding financial years.	Para. 14(3a)	This refers to the difference between capital allowances and depreciation (normally referred to as Deferred Taxation).
<i>Turnover</i> The amount and method of calculation	Para. 13A	This should only cover external sales of a company and if in excess of £250,000.

Table 14.2

<i>Publication of items on the Balance Sheet</i>	<i>Reference Schedule 2 1967 Act</i>	<i>Comments</i>
<i>Assets</i> Analysed between fixed, current and neither fixed nor current.	Para. 4(2)	
<i>Fixed</i> (a) Aggregate amount of additions and disposals during the year.	Para. 11(6B)	
(b) Division of land between	Para. 11(6c)	
(i) Freehold,		

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
(ii) Long Leases, (iii) Short Leases.		A long lease is one which has 50 years' life from the Balance Sheet date.
(c) The methods used to arrive at the amount for each type of asset.	Paras. 4(3) and 5	Usually cost less depreciation charged to date.
(d) Where a valuation is used		Usually only necessary on Freehold property but can apply to any Fixed Assets.
(i) the year and amount	Para. 11(6A)	
(ii) the name and qualification of valuer where valuation carried out in the year under review.		
<i>Current</i>		
(a) The method of calculating the value of Stock or Work in Progress.	Para. 11(8B)	Usually the lower of cost or net realisable value.
(b) Whether, in the opinion of the directors, the market value is less than the amounts at which they are stated.	Para. 11(7) Para. 6(b)	Would include trade debtors and Hire Purchase debtors after provision for bad debts and unrealised profits.
(c) Amounts of loans made during the year to any officer of the company and the amounts outstanding at the year end.	1948 Act Secs. 197 and 190	It should be remembered that it is illegal for a company to lend money to its directors unless it represents any advances on account of expenses. A director is an officer of the company.
(d) Amount of outstanding loans for purchase of company's own shares by employees.	Para. 8(1)(c)	
<i>Neither Current nor Fixed Goodwill, etc</i>		
The amount not yet written off.	Para 8(1)(b)	This includes Goodwill, Patents and trade marks, Preliminary Expenses, Discounts on Debenture, Shares issue costs (Para 3).

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Investments</i>		
Aggregate amounts of quoted and unquoted investments, respectively.	Para. 8(1)(a)	
Aggregate market value of quoted investments	Para. 11(8)	Where different from Stock Exchange value the Stock Exchange value must be shown.
The directors' valuation of unquoted investments.	Para. 5(5A)	Where the directors do not give a valuation details of (a) Income received from Investments. (b) Share of aggregate profit (c) Share of accumulated profits. (d) Details of the treatment of losses in the company's accounts.
<i>Capital Expenditure</i>		
(1) The amount of expenditure for which contracts have been placed.	Para. 11(6)	This shows the amount the company is liable to meet.
(2) The amount of expenditure authorised but for which contracts have not been signed.		This shows the amount which may possibly be cancelled.
<i>Contingent Liabilities</i> The type and amount of these which have not been provided for in the accounts.	Para. 11(5)	A contingent liability is a liability which cannot be exactly determined and is contingent on the happening of some event outside the control of the company, e.g. the outcome of a legal case or the amount of costs on servicing guarantees.
<i>Currency</i>		
The basis on which foreign currencies have been converted into sterling.	Para. 11(9)	

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Corresponding Figures</i>		
For any item shown on the Balance Sheet or notes.	Para. 11(11) and Secs 10 & 11.	
<i>Dividends</i>		
The amount recommended for distribution as dividend.	Para. 8(1)(e)	Also shown on the Profit and Loss Account.
Amounts of arrears of cumulative dividends and the period the arrears cover.	Para. 11(3)	
<i>Liabilities</i>		
<i>Loans</i>		
(a) Aggregate amount of Bank Loans and Over-drafts.	Para. 8(1)(d)	
(b) Loans repayable by lump sum after 5 years from the Balance Sheet date.		Details of the terms of repayment and interest rates have to be given. Where liabilities are secured on the assets this must be stated; the assets charged need not be specified. (Para. 9)
(c) Loans repayable by instalments, last instalment due after 5 years from date of the Balance Sheet.		
Nominal amount of debentures issued but held by company	Para. 10	
nominees. Details of any debenture which the company has power to reissue.	Para. 2D	
Details of other liabilities.	Para. 2	No details of the exact classification of current liabilities is legally required.
<i>Reserves and Provisions</i>		
Aggregate amounts of reserves and provisions	Para. 6	A provision is created for specific purposes, whereas a reserve is a non-specific.
Amounts of Share Premium.	Para. 2(c)	It is usual for companies to specify the various reserves.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
All movements in reserves and provisions.	Para. 7	
<i>Share Capital</i>		
Summary of authorised and issued share capital.	Para. 2	It is usual to specify the number and nominal value of each class of share. These must include earliest and latest date of redemption.
Details of terms and dates of Redeemable Preference Shares.	Para. 2(a)	
Details of any share option scheme	Para. 11(2)	
<i>Taxation</i>		
Amounts provided for undue fluctuations in charges in Taxation.	Para. 7A	Often referred to as Tax Equalisation or Deferred Taxation. Detailed presentation is covered by S.S.A.P.8.

Table 14.3

<i>Directors Report</i>	<i>1967 Act</i>	<i>Comments</i>
Amounts shown in this report which could have been shown in the accounts must have corresponding figures.	Sec. 22	In working a question on Published Accounts include as many of the requirements in the accounts as possible.
<i>Activities</i>		
The principal activities and any changes thereto.	Sec. 16(1)	
<i>Assets</i>		
Details of significant changes.	Sec. 16(1a)	This should also be seen on the Balance Sheet notes, e.g. Fixed Assets disposals.
<i>Capital and Loans</i>		
Details of new issue of shares or debentures and how the funds were applied.	Sec. 16(1)B	This would include the amounts received on each class issued.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
<i>Directors</i>		
The names of the directors who held office at any time during the period.	Sec. 16(1)	
Details of option schemes by which they can obtain shares or debentures in the company or any other company.	Sec. 16(1)D	
Details of interest in shares and debentures in the company to include movements in the year.	Sec. 16(1)(e)	
<i>Dividends</i>		
		The amount expressed on a pence per share basis.
<i>Donations</i>		
Political and charitable details of amounts and the recipient of political donations. Aggregate amount of charitable donations.	Sec. 19	Where the total exceeds £50 it must be divided between charitable and political. Political donations in excess of £50 must specify recipient.
<i>Employees</i>		
The average number employed and their aggregate remuneration where the number employed exceeds 100.	Sec. 18	
<i>Export</i>		
The value of goods exported. If <i>Nil</i> , a note to that effect.	Sec. 20	Only necessary where turnover exceeds £250,000.
<i>Investments</i>		
	Sec. 4	Where a company holds 10% of the nominal value of a class of share or holds 10% of the total capital of another company, the name, place of incorporation, class and proportion of shares held of that company must be stated.

<i>Published requirement of the Profit and Loss Account 1967 Act</i>	<i>Reference Schedule 2</i>	<i>Comments</i>
Results		
Details of the recommended dividend and transfers to reserves.	Sec. 157(1) (1948 Act)	A summary of the Profit and Loss Account is generally included under this heading.
Any other matters which affect the state of affairs of the company where this would not be harmful to company.	Sec. 16(1)F	
Turnover		
By class of activity and the proportion of profit attributable to each class of business. The contribution of each class of business to the total profits for the period.	Sec. 17(1)	Only necessary where turnover exceeds £250,000.

Company requirements where consolidated accounts are required

There are several areas of further information which are required when a company is publishing consolidated accounts. Consolidated sets of accounts should include the total figures of the group for items mentioned earlier, e.g. hire of plant, fixed assets, depreciation. The main areas of difference are the following:

(1) *Directors' Emoluments.* Details of directors not employed by the holding company need not be shown – Sec. 196.

(2) *Group Profit.* The consolidated Profit and Loss Account must show the proportion of the total profit attributable to subsidiaries – Sec. 149 (5Bii).

(3) *Investments.* A Holding Company must disclose the name, country of incorporation and the proportion of each class of shares held in the subsidiary and whether these are held directly or by other subsidiaries – Sec. 3.

Where the company is itself a subsidiary the name of its ultimate holding company and its country of incorporation – Sec. 5.

Where consolidated accounts are not being presented the following additional information is required:

(a) The amount of shares in and other amounts owing from the subsidiary; also the amounts owing to fellow subsidiary companies – Para. 15.2.

(b) A subsidiary must show the aggregate amount owing to and by the parent company – Para. 16.

- (c) Reasons why the subsidiary has not been consolidated – Para. 15(4).
- (d) The aggregate amount of profits in the subsidiary attributable to the parent company and the holding company's treatment of the amount – Para. 15(4).

In addition to the legal requirements for company accounts and the provisions of the accounting bodies, the Stock Exchange also lays down conditions which a company requiring a quotation for its shares must comply with. The main items affecting accounts are:

- (1) Notification to the Stock Exchange of Board Meetings at which dividends or profits are to be declared, and notification to the Stock Exchange of preliminary profit announcements and dividends.
- (2) Material acquisitions and disposals of assets.
- (3) Any changes in the directorate.
- (4) Reasons for not providing accounts within six months of the end of the financial year.
- (5) Details of the following must be provided:
 - (a) a half-yearly report on the state of the business and the results at least 6 months before the Annual General Meeting which should include earnings per share.
 - (b) Reasons for adopting alternative methods of accounting if not in accordance with standard accounting practice.
 - (c) The geographical analysis of turnover and profit contribution of operations outside the UK.
 - (d) Particulars of agreements under which directors waive fees and shareholders waive dividends.
 - (e) A statement of results for the previous ten years is normally included.

B. Ltd has an authorised capital of £800,000 divided into 200,000 6% cumulative preference shares of £1 each and 600,000 ordinary shares of £1 each. The company's trial balance at 31 December 19–1 was as follows:

6% Cumulative Preference Shares of £1 each	200,000	
Ordinary Shares issued and fully paid	400,000	
Share Premium Account	20,000	
General Reserve	90,000	
Profit and Loss Account, balance 1 Jan. 19–1	25,500	
5% 1st Mortgage Debenture Stock (Interest payable 30 June and 31 Dec.)	101,000	
Creditors and accrued liabilities	46,166	
Dividends from unquoted Investments	2,750	
Dividends from quoted Investments	1,250	
Corporation Tax (Payable 1 Jan. 19–2)	35,000	
Stocks	81,642	
Works-in-Progress	225,323	
Debenture Issue Expenses	2,450	
Trade Debtors	186,957	
Payments in advance	9,400	
Unquoted Investments at cost	52,524	
Quoted Investments at cost	18,242	
Balance at Bank	31,850	
Cash in Hand	2,123	
Freehold Property at Cost	320,000	
Leasehold Property at Cost	81,260	
Plant and Machinery at Cost	277,600	
Dividend on 6% Cumulative Preference Shares (Paid 31 Dec. 19–1)	12,000	
Interim dividend of 4% on Ordinary Shares (Paid 31 Oct. 19–1)	16,000	
Trading Profit for Year		186,000
Progress payments against Work in Progress		64,320
Provision for bad and doubtful debts		6,145
Depreciation: Leasehold Property		29,435
Plant and Machinery		109,805
	<u>£1,317,371</u>	<u>£1,317,371</u>

You are informed that:

The turnover for the 12 months ended December 19–1 was £1,436,220.

The Trading Profit for the year is arrived at after charging:

Debenture Interest	5,050
Directors' Salaries	15,600
Directors' Fees	2,400
Managing Director's Salary	15,000
Maintenance of Buildings and Plant	22,640
Rent and Rates	14,220
Superannuation contributions for non-directors	11,500
Hire of Plant	3,200
Interest on Bank Overdraft	346

The figure for directors' fees and salaries includes the emolument of the chairman £2,600, 2 directors' emoluments amounting to £5,200 each and 2 others £2,500 each.

The following provisions are to be made:

(a) Auditors' remuneration (including £150 for expenses)	1,350
(b) Depreciation: Leasehold Property	7,925
Plant and Machinery	26,220
(c) Additional provision for doubtful debts	625
(d) Corporation Tax on 19–1 profits @ 50% (payable 1 Jan. 19–3)	69,000
(e) Against a loss on an uncompleted contract the cost of which is included in work-in-progress.	3,000
(f) Transfer to Debenture Redemption Fund	19,000

The directors have decided to recommend a final dividend of 7% and an appropriation of £10,000 to general reserve.

In the 19–0 accounts, corporation tax had been underestimated, resulting in an under-provision of £15,000 that year.

Debenture issue expenses are to be written off against the Share Premium Account.

By an extraordinary resolution dated 1 October 19–1 the company issued 50,000 ordinary shares of £1 each, fully paid by capitalising the reserves.

The company had purchased plant and machinery at a cost of £40,000. Cost of plant sold was £30,000, the accumulated depreciation amounting to £29,900. Revenue from sale £300. The profit has been dealt with in arriving at the figure for trading profit in the Trial Balance.

The market value of the quoted investments at 31 December 19–1 was £19,210 and the directors valued the unquoted investments at £56,498 at that date.

The directors had authorised capital expenditure totalling £29,300 of which £9,000 had been placed in the hands of contractors.

Prepare the accounts in a form suitable for publication.

Examination questions include items for the published accounts: (a) already charged against Trading Profits; (b) shown separately on the Trial Balance; (c) In the adjustments still to be incorporated in the Trial Balance.

A preliminary working is necessary to calculate the profit before taxation:

Profit per Trial Balance	186,000	Balance Sheet
		adjustments
Less Auditor's remuneration	1,350	Creditors 46,166 +
		1,350
Depreciation	34,145	Depreciation Provi-
Bad debts	625	sion 29,435 + 7,925
Loss on WIP	<u>3,000</u>	109,805 + 26,220
	<u>39,120</u>	Debtors Provision
	146,880	6145 + 625 625
Add Income from Investments		WIP 225,323—3,000
shown on Trial Balance	<u>4,000</u>	
<i>Profit before tax</i>	<u>£150,880</u>	

The only other adjustments that will be necessary are:

- (1) Under-provision for taxation in the previous year
 - (a) Reduce b/f Profit and Loss Account balance.
 - (b) Increase Taxation Creditor (35,000 + 15,000)

- (2) Offsetting items on the Trial Balance

Debenture issue expenses	(2,450)
Share premium	<u>20,000</u>
Per Balance Sheet	<u>£17,550</u>

- (3) Progress payments against WIP

WIP	225,323
Less Progress payments	64,320
Adjustments re loss	<u>3,000</u>
	<u>67,320</u>
	158,003
Stocks	<u>81,642</u>
Per Balance Sheet	<u>£239,645</u>

- (4) Debtors

Debtors	186,957
Payments in Advance	<u>9,400</u>
	196,357
Less Provision	6,145
Adjustment	<u>625</u>
	<u>6,770</u>
Per Balance Sheet	<u>£189,587</u>

(5) In order to complete the Fixed Assets Schedule the balance at 1 January is required, i.e.

Figure per Trial Balance	277,600
Add disposals	<u>30,000</u>
	307,600
Less additions	<u>40,000</u>
Balance of 1 Jan.	<u><u>£267,600</u></u>

A similar calculation is required for depreciation. Profit on sale £200 will not be shown in published accounts as it is not considered to be a material figure.

(6) The General Reserve per Trial Balance	90,000
Add Profits capitalised during year.	<u>50,000</u>
Balance at 1 Jan.	<u><u>£140,000</u></u>

(7) No adjustment has been made for Advanced Corporation Tax due on the proposed dividend and paid on the interim and preference dividend. The tax due in respect of such dividends will be paid over to Inland Revenue within 3 months of date of dividend payment and subsequently deducted from final Corporation Tax liability.

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 19–1

NOTES:

(1) Turnover		<u>£1,436,220</u>
(2) Profit before taxation		150,880
Less taxation based on the profits for the year @ 50%		<u>69,000</u>
Profit after taxation.		81,880
Unappropriated earnings from previous years	25,500	
Less under provision of Corporation Tax in previous year	<u>15,000</u>	<u>10,500</u>
Available for distribution		92,380
Dividends		
Paid 6% Preference	12,000	
4% Ordinary Interim	16,000	
Proposed 7% Ordinary Final	28,000	
	<u>56,000</u>	
Transfers to Reserve		
General	10,000	
Debenture	<u>19,000</u>	
Redemption	29,000	<u>85,000</u>
Unappropriate earnings 31 Dec. 19–1		<u><u>£7,380</u></u>

BALANCE SHEET AS AT 31 DECEMBER 19—1

Notes:

(3) <i>Fixed Assets</i>		505,475
(4) <i>Investments</i>		70,766
	<i>Current Assets</i>	
(5) Stocks and Work in Progress	239,645	
Debtors	189,587	
Bank and Cash	<u>33,973</u>	
	463,205	
	<i>Current Liabilities</i>	
Taxation	50,000	
Creditors	47,516	
Proposed Dividend	<u>28,000</u>	
	125,516	
<i>Net Current Assets</i>		<u>337,689</u>
		913,930
Less Corporation Tax due 1 Jan 19—3		<u>69,000</u>
		<u>£844,930</u>
(6) <i>Share Capital</i>		600,000
(7) <i>Reserves</i>		136,550
<i>Profit and Loss</i>		7,380
(8) <i>5% Debenture Stock</i>		<u>101,000</u>
		<u>£844,930</u>

NOTES TO THE ACCOUNTS (forming part of the accounts):

(1) *Turnover* represents the invoiced value of goods sold. There were no exports.

(2) (A) Profit before taxation is after charging:		
	Auditors' remuneration	1,350
	Depreciation	34,145
	Directors' Emoluments	
	Salaries	30,600
	Fees	2,400
	Interest on Debentures	5,050
	Interest on Bank Overdraft	346
	Hire of Plant	<u>3,200</u>
	After crediting	
	Investment Income (See Note 4)	<u>4,000</u>

(B) <i>Directors' Emoluments</i>		
Chairman		2,600
Highest paid Director		15,000
Other Directors		
		No.
£0 — £2,500		2
£2,501 — £5,000		—
£5,001 — £7,500		2

(3) Fixed Assets	Freehold	Long Leasehold	Plant Machinery	Total
Cost 1 Jan. 19-1	320,000	81,260	267,600	668,860
Additions	—	—	40,000	40,000
	320,000	81,260	307,600	708,860
Sales	—	—	30,000	30,000
Balance 31 Dec 19-1	320,000	81,260	277,600	678,860
Depreciation				
1 Jan 19-1	—	29,435	139,705	169,140
Annual Charge	—	7,925	26,220	34,145
	—	37,360	165,925	203,285
Eliminate for Disposals	—	—	29,900	29,900
Balance 31 Dec 19-1	—	37,360	136,025	173,385
Net Book Value	£320,000	43,900	141,575	505,475

(It is not obligatory to show details of the annual movements on the depreciation provision.)

(4) Investments	Income	Cost	Valuation	Source
Quoted	1,250	18,242	19,210	Market
Unquoted	2,750	52,524	56,498	Directors
	£4,000	£70,766		

(5) *Stocks and Work-in-Progress* are valued at the lower of cost or net realisable value.

(6) *Share Capital*

	Authorised	Issued
Ordinary £1	600,000	400,000
6% Cumulative Preference £1	200,000	200,000
	£800,000	£600,000

During the year, 50,000 £1 ordinary shares were issued to existing shareholders (1 for every 7 held) and were settled by a capitalisation of the reserves.

(7) Reserves	Share Premium	General	Debenture redemption
As at 1 Jan. 19—1	20,000	140,000	—
Capitalisation	—	(50,000)	
Profit and Loss appropriation	—	10,000	19,000
Debenture Issue expenses written off	(2,450)		
	<u>£17,550</u>	<u>100,000</u>	<u>19,000</u>

(8) *5% Debenture Stock* is secured by a floating charge on the Assets and is redeemable on 1 Jan. 19—6.

(9) *Capital Expenditure.* The directors have authorised capital expenditure of £29,300 of which £9,000 has been placed with contractors.

The following is an example of an internal Manufacturing, Profit and Loss Account from which the information for the published accounts will be extracted:

Cost of Raw Materials Used	1,530,550
Sales	2,996,800
Sales Salaries (Including Executive Director £12,300)	49,500
Investment Income	42,000
Factory Wages	367,200
Debtors	506,000
Bad Debt Provision	5,500

A.C. Ltd, a company which manufactures electronic equipment, has an issued capital of 100,000 6% redeemable preference shares of £1 each and 200,000 ordinary shares of 50p.

The balances on the books at the close of the financial year included the following:

Office Fixtures, at cost	75,000
Factory Plant, at cost	720,400
Vehicles, at cost	34,500
Leasehold Buildings — Factory	160,000
Office	80,000
Advertising	13,560
Bank Charges	1,430
Carriage Inwards	4,670
Loan Interest	30,000
Office Salaries (Including Executive Director £31,000)	104,000
Plant Repairs (Including Hire Charges £12,500)	15,150
Lighting, Power, Rent, Rates, etc. — Factory	40,610
Office	52,200

Selling and Distribution Expenses		14,950
Directors' Fees (Includes Chairman	£25,000	45,000
2 Directors at	£4,000	
1 Director at	£12,000)	
Profit and Loss Account – at commencement of year		86,520
Stocks of WIP (at commencement		23,460
(at end)		25,490
Stocks of Finished Goods – at commencement		17,840
at end		14,220
Works Management salaries (Including Works Director £18,000)		28,000

The following matters have not been dealt with:

Depreciation:	Plant 5%
	Fixtures 15%
	Vehicles 25%
	Leases over 40 years.

Increase Bad Debt Provision to 2% of Debtors

Audit Fee to be provided £6,000

Corporation Tax liability is estimated at £250,000

£200,000 is to be transferred to Plant Replacement Reserve and £130,000 to General Reserve.

The following dividends are to be provided for:

Preference for year Ordinary @ 12½% for year

Loan interest includes £4,000 on Bank Overdraft and charge in respect of 10% £260,000 Secured Loan Stock payable 31 Dec. 1974.

Investment Income represents the dividend on shares in an unquoted company and interest of £16,875 on 6¼% Surrey County Council stock.

<i>Workings</i>	<i>Depreciation</i>	<i>Directors' emoluments</i>	
Plant	36,020	Executive Director	31,000
Lease	4,000	Executive Director	12,300
Fittings	11,250	Directors' Fees	45,000
Vehicle	8,625	Work Director	18,000
Leaseholds	2,000		
	<u>£61,895</u>		<u>£106,300</u>

Manufacturing Trading and Profit and Loss Account

A.C. Ltd for the year ending . .

Sales		2,996,800
Raw Materials Used	1,530,550	
Carriage Inwards	4,670	
Factory Wages	367,200	
Plant Repairs	15,150	
Factory, Light, Rent, etc.	40,610	
Works Management Salaries	28,000	
Plant Depn.	36,020	
Factory Lease Amortisation	<u>4,000</u>	
Carried forward	2,026,200	<u>2,996,800</u>

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Brought forward		2,026,200	2,996,800
Work in Progress	Start	23,460	
	End	<u>25,490</u>	2,030
Costs of Goods Produced		<u>2,024,170</u>	
Finished Goods	Start	17,840	
	End	<u>14,220</u>	<u>3,620</u>
Cost of Goods sold			<u>2,027,790</u>
Gross Profit			969,010
<i>Office Expenses</i>			
Office Salaries	104,000		
Office, Rent, Light, etc.	52,200		
Fittings Depn.	11,250		
Bad Debts	<u>4,620</u>		
		172,070	
<i>Selling Expenses</i>			
Sales Salaries	49,500		
Selling and Distr. Expenses	14,950		
Advetising	13,560		
Vehicle Depn.	<u>8,625</u>		
		86,635	
<i>Admin. Charges</i>			
Leasehold Depn.	2,000		
Directors Fees	45,000		
Loan Interest	30,000		
Bank Charges	1,430		
Audit Fee	<u>6,000</u>		
		<u>84,430</u>	
			<u>343,135</u>
			625,875
Investment Income			<u>42,000</u>
Net Profit			667,875
Taxation		250,000	
Transfer to Reserves			
Plant Replacement		200,000	
General		130,000	
Preference Dividend		6,000	
Ordinary Dividend		<u>12,500</u>	
			<u>598,500</u>
Balance for Year			69,375
Balance b/f			86,520
Balance c/f			<u>£155,895</u>

Profit and Loss Account for the year ended . . .

<i>Turnover</i>		<u>£2,996,800</u>
Profit before taxation		667,875
After charging		
Depreciation	61,895	
Loan Interest	26,000	
Bank Interest	4,000	
Audit fee	6,000	
Hire of equipment	12,500	
(Note 1) Director's Emoluments	<u>106,300</u>	
After crediting		
Income Unquoted Investments	25,125	
Income Quoted Investments	<u>16,875</u>	
<i>Corporation Tax</i> based on the profits for the year at –%		250,000
Profits after taxation		417,875
Appropriations		
Dividends: Ordinary	12,500	
Preference	6,000	
Transfers to Reserves	<u>330,000</u>	348,500
		69,375
Balance from previous year		<u>86,520</u>
Unappropriated earnings		<u>£155,895</u>

Note 1 (Directors' Emoluments):

Chairman	£25,000
Highest paid director	£31,000
	No.
£0 – £2,500	–
£2,501 – £5,000	2
£5,001 – £7,500	–
£7,501 – £10,000	–
£10,001 – £12,500	1
£12,501 – £15,000	1
£15,001 – £17,500	–
£17,501 – £18,000	1
etc.	

Corporation Tax

Corporation tax is a tax on a limited company's profits. The tax is payable 9 months after the end of the financial year or on 1 January of the year following the year of assessment for a company trading before 1965. The tax assessment year runs from 1 April to 31 March. Corporation tax would be payable:

Companies established after 31 March 1965

	A	B	C
Financial year end	31 Dec. -1	31 March -2	5 April -2
Tax payable	1 Oct -2	1 Jan -3	6 Jan -3
Credit period	9 months	9 months	9 months

Companies established before 31 March 1965

	A	B	C
Financial year	31 Dec -1	31 March -2	5 April -2
Tax year	-1/-2	-1/-2	-2/-3
Tax payable	1 Jan -3	1 Jan -3	1 Jan -4
Credit period	12 months	9 months	21 months

It is possible for a company to have more than one amount of corporation tax outstanding at the end of a financial year. For a company which has 21 months' credit it may be possible to have 3 years' tax outstanding.

Balance Sheet date 5 April -4

Outstanding

Corporation tax due 1 January -4 on profits year ended 5 April -2. This is an overdue debt and would be included in the creditors. The reason for it not being paid may be because the exact amount has not yet been agreed with the Inland Revenue.

Corporation tax due 1 January -5 on profits year ended 5 April -3. Tax on the previous year's profits.

Corporation tax due 1 January -6 on profits year ended 5 April -4. An estimate of the amount due on the company's profits which will probably need adjusting when agreement is reached with the Inland Revenue.

Tax is also payable when a dividend is paid to shareholders. This amount is an advance payment of the corporation tax and is normally deducted from the next corporation tax payment.

Corporation tax is calculated on a basis of profits earned but these profits are adjusted for such items as depreciation which is not an allowable expense and is substituted by writing down allowances. There are several other disallowable items such as entertaining UK residents and payments under deed of covenant to charities.

When the accounts are prepared the exact amount of tax may not be known, as the calculations have to be agreed by the Inland Revenue. A provision for the approximate amount will be incorporated in the accounts.

Year 1	Dr. Profit and Loss Account } Cr. Corporation Tax Account }	Amount calculated
Year 2	Dr./Cr. Profit and Loss Account } Cr./Dr. Corporation Tax a/c }	Under/over-provision for taxation in the previous year.

When a company pays dividends it is required to pay a proportion of its corporation tax (Advanced Corporation Tax – ACT) within three months of the dividend payment. When a company receives dividends from UK companies it also receives a tax credit which can be set against tax due on its dividends (Franked Investment Income – FII).

Taxable Profits Year 1 £50,000 Year 2 £60,000 Paid Dividend Year 1 £ 7,000 Year 2 £21,000 Franked Investment Income Year 1 – Year 2 £14,000	basic rate 50% payable 30 June basic rate 50% payable 30 June ACT rate 3/7ths paid 31 March ACT rate 3/7ths paid 31 March received February.
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Corporation Tax

		<i>Year 1</i>	
31 March ACT	3,000	30 Sept. Profit and Loss a/c	25,000
Balance c/d	<u>22,000</u>		
	<u>£25,000</u>		<u>£25,000</u>
		<i>Year 2</i>	
30 June Cash	22,000	Balance c/d	22,000
30 June ACT	9,000	30 Sept. Profit and Loss a/c	30,000
Balance c/d	<u>21,000</u>		
	<u>£52,000</u>		<u>£52,000</u>

Franked Investment Income

		<i>Year 2</i>	
Profit and Loss Account	<u>20,000</u>	Cash	14,000
		Tax Credit 3/7ths x 14,000	<u>6,000</u>

ACT

		<i>Year 1</i>	
30 June Cash	<u>£3,000</u>	31 Mar. 3/7ths x 7,000 C.T.	<u>£3,000</u>
28 Feb. FII	6,000		
30 June Cash	<u>3,000</u>	31 Mar. 3/7ths x 21,000	9,000
	<u>£9,000</u>		<u>£9,000</u>

Dividend Account

		<i>Year 1</i>	
Cash	<u>7,000</u>	Profit and Loss Account	<u>7,000</u>
		<i>Year 2</i>	
Cash	<u>£21,000</u>	Profit and Loss Account	<u>£21,000</u>

In certain years substantial amounts of plant may be acquired or disposed of and this may affect the corporation tax. To avoid these sudden fluctuations which are not connected with changes in the trading profits, a Deferred Tax Account may be set up. The Profit and Loss Account will be charged with an amount equal to the amount by which the corporation tax has been depressed as a result of exceptional capital allowances and the Deferred Tax Account will be credited. In subsequent years when the corporation tax is higher because the depreciation charge is greater than the Capital Allowances, the Deferred Tax Account will be reduced and the Profit and Loss Account credited with an appropriate amount of tax. This has the effect of equalising the corporation tax charges to bring them into line with the trading profit.

Example of The Calculation of Deferred Taxation

	<i>Originating (reversing) timing differences</i>		<i>Tax rate</i>	<i>Annual charge/ credit</i>
<i>Year 1</i>				
Capital allowances	8,000			
Depreciation	<u>2,500</u>	5,500	50%	<u>2,750</u>
				2,750
<i>Year 2</i>				
Tax Rate Adjust.				110
Capital allowances	12,500			
Depreciation	<u>5,500</u>	<u>7,000</u>	52%	<u>3,640</u>
		12,500		3,750
<i>Year 3</i>				
Tax Rate Adjust.				125
Capital allowances	4,375			
Depreciation	<u>6,500</u>	<u>(2,125)</u>	53%	<u>(1,126)</u>
		10,375		(1,001)
<i>Year 4</i>				
Tax Rate Adjust.				(207)
Capital allowances	7,000			
Depreciation	<u>10,000</u>	<u>(3,000)</u>	51%	<u>(1,530)</u>
				<u>(1,737)</u>
				<u>£3,762</u>

Year 1

The deferred tax charge of £2,750 represents the amount of tax which will become payable in subsequent years based on year 1 Profits.

Year 2

Because the rate of tax changed it is necessary to adjust the previous deferred tax provision.

Year 3

The depreciation charge exceeds the allowances. Tax will be payable on the difference; a transfer is made from the Deferred Tax Account to offset the additional charge.

DEFERRED TAX ACCOUNT

		Year 1 Profit and Loss a/c	2,750
		Year 2 Profit and Loss a/c	3,750
Year 3 Profit and Loss a/c	1,001		
Year 4 Profit and Loss a/c	1,737		
Balance	3,762		
	<u>£6,500</u>		<u>£6,500</u>

Salient features of Statement of Standard Accounting Practice 8 – Treatment of Corporation Tax

(1) Dividends payable are shown in the Profit and Loss Account at the amount actually paid to shareholders. The full amount of corporation tax is deducted from the profit.

(2) Advanced corporation tax is recovered by set off against corporation tax of the related year in which the distribution is made.

(3) Advanced corporation tax should be written off if it is not likely to be offset within the next accounting period, unless there is a deferred tax account.

(4) Irrecoverable ACT would not normally be treated as an exceptional item.

(5) Income from Franked Investments should be credited to the Profit and Loss Account at the amount received plus the Tax Credit.

(6) The mainstream Corporation Tax due should be shown separately for each year where not shown under the Current Liabilities together with the date of payment.

(7) ACT due on prepared dividends should be shown as a current tax liability.

(8) The following items have to be included in the tax charge in the Profit and Loss Account and shown separately:

Corporation tax specifying the charge and the rate for the year.

Transfers to the Deferred Tax Account.

Tax attributable to Franked Investment Income

Irrecoverable ACT

Relief for overseas taxation.

Terminology

Recoverable Advance Corporation Tax: The amount payable on outgoing dividends paid which can be (i) set off against corporation tax liability; (ii) set off against deferred tax account; (iii) recoverable in the next accounting period.

Mainstream Corporation Tax: the amount due to be paid after deducting ACT from the corporation tax.

Franked Investment Income: dividends received from other UK companies paid out of profits subjected to Corporation Tax.

Salient features of Statement of Standard Accounting Practice 11 – Deferred Taxation

(1) Deferred taxation accounts arise as a result of tax allowances for depreciation being materially more than the depreciation charges in the accounts.

(2) In subsequent years when the allowance is less than the charge the provision for deferred taxation is credited to the Profit and Loss Account over the period of the benefit.

(3) When assets are revalued the tax charge on the profit should be dealt with through the Deferred Tax Account.

(4) Deferred Tax Account should be shown separately and described as such. It is not to be included in the Current Liabilities.

(5) The transfers between the Deferred Tax Account and the Profit and Loss Account should be shown separately under Taxation.

Terminology

Timing difference: the difference between profits for taxation purposes and profits in the Financial Accounts.

Questions

14.1 The following Trial Balance of Ingram Ltd is provided at 31 May. The company's main activity is the distribution of chemical products.

Ordinary Capital	–	350,000
Preference Capital	–	150,000
Profit and Loss Account 1 June	–	85,000
Goodwill, at cost less written off	70,000	–
Land and Buildings	220,000	–
Plant	80,000	–
Motor Vehicles	55,000	–
Depreciation Provisions:		
Land and Buildings	–	50,000
Plant	–	13,400
Vehicles	–	28,750
Stocks, at cost	193,850	–
Debtors and Creditors	93,490	76,850
Bank	130,650	–
Profit for year	–	75,975
Half-year Preference Dividend (Gross)	6,000	–
Investment Income	–	3,915
Investments	39,900	–
Corporation Tax	–	55,000
	<u>£888,890</u>	<u>£888,890</u>

Authorised capital is £150,000 8% £1 Redeemable preference shares and 700,000 50p ordinary shares, the preference shares being redeemable between 1 January 19–5 and 30 June 19–8.

The profit for the year is after charging the following items:

- (1) Bad Debt Provision £950.
- (2) Audit Fee £1,250.
- (3) Advertising £10,300.
- (4) Managing Director's Salary £28,000, Chairman's Salary £32,000 and three other directors each earning £15,500.
- (5) The following provisions are to be made:

(a) Depreciation

Plant:	5% on cost
Buildings:	Long Leases – £1,000 Short Leases – £4,000
Vehicles:	30% on cost

(b) Corporation Tax at current rate £33,000. There has been an under-provision on the previous year of £690.

(c) Final Preference Dividend and an Ordinary Dividend of 15%.

Land and buildings consist of:

(1) Freeholds, at cost, £100,000, including £20,000 expenditure during the year. (No depreciation to be provided.)

(2) Leaseholds costing £80,000 have 80 years to run and leaseholds costing £40,000 have 10 years to run. Accumulated depreciation is £30,000 and £20,000 respectively.

Investments consist of:

(1) 15,900 £1 Shares purchased at par, being the total capital of Medics Ltd, a private company, the directors' valuation being £18,900.

(2) 8% Debentures in Doctrine Ltd, with a market value of 98.

Contingent Liabilities consist of discounted Bills of Exchange £16,500 and a claim for injuries suffered by a customer, whilst on the company's premises, in the sum of £1,900.

Capital Expenditure authorised amounts to £98,000 of which sum £69,000 has been contracted for.

Turnover for the year amounted to £1.75 m.

You are required to prepare the Profit and Loss Account for the year to 31 May and a Balance Sheet for publication.

14.2 The following is the Trial Balance of Highlands Ltd, at 30 September:

Authorised and Issued share capital:		
100,000 ordinary shares of £1 each		
fully paid		100,000
Share Premium Account		5,000
Motor vehicles		
at cost	6,250	
Provision for depreciation on motor		
vehicles (at 20% per annum on cost)		
to 30 September		2,500
Gross profit on Trading		75,000
Freehold and Leasehold properties	117,650	
Investments (at cost)	10,000	
Investment income (including rent		
receivable)		4,320
Salaries and wages	28,500	
Debtors	35,165	
Trade creditors		19,480
Bank overdraft		1,265
General expenses	25,200	
Directors' Fees	9,000	
Provision for depreciation of leasehold		
properties to 30 Sept.		30,900
Stock in trade, 30 Sept. (at cost)	18,700	
Profit and Loss Account: balance at		12,000
	<u>£250,465</u>	<u>£250,465</u>

(1) Salaries and wages (£28,500) includes £4,000 for the salary of Brown, the sales manager, who is a director of the company. The directors' fees (£9,000) are shared between three directors, Smith (the chairman), Jones and Brown, in the proportions one-half, one-third and one-sixth, respectively.

(2) The item Properties (£117,650) includes two leaseholds: (i) cost £18,000 on a 60-year lease, 3 years expired, and (ii) cost £80,000 on a 40-year lease, 15 years expired. Depreciation has been provided by the straight-line method. The properties account has also been debited with £19,650 in respect of a freehold property purchased at a cost of £20,000. An amount of £350, deducted on completion of the purchase, represents rent paid by a tenant for three months.

(3) The investments (£10,000) consist of £3,000 8% debentures in a public company (cost £3,000) and shares in a private company. The current market value (Stock Exchange quotation) of the debentures is £3,000. The value of the shares is estimated by the directors to be £6,000, but it has been decided not to write them down in the books.

(4) The investment income (£4,320) includes (i) a full year's debenture interest, (ii) £3,650 in respect of rent receivable from the tenant of one of the leasehold properties, and (iii) dividends in respect of the shares in the private company.

(5) General Expenses (£25,200) includes depreciation of fixed assets and £115 interest on bank overdraft.

(6) Gross Profit is at the uniform rate of 20% of sales.

(7) The directors propose to pay a dividend of 10% for the year to 30 September.

You are required to prepare a Profit and Loss Account to 30 September and a Balance Sheet as on that date, for publication.

14.3 Polygums Ltd, a sweet manufacturing company, has an authorised and issued share capital of £300,000, consisting of 100,000 7% redeemable preference shares of £1 each and 2,000,000 ordinary shares of 10p each, all fully paid.

The company makes up its accounts to 30 June in each year. The following draft accounts were prepared by the book-keeper from the books as at 30 June.

Balance Sheet

Capital		Fixed Assets		
Ordinary shares	200,000	Freehold land and buildings		95,000
		Plant and Machinery (at cost)	120,000	
Preference shares	100,000	Less provision for depreciation	<u>30,000</u>	90,000
Share premium	10,000	Motor Vehicles (at cost)	22,400	
Asset Revaluation Reserve	5,000	Less provision for depreciation	<u>6,400</u>	16,000
Profit and Loss Account	<u>70,862</u>	Goodwill (at cost)		100,000
	385,862	Investments (at cost)		
Current Liabilities		Quoted	15,500	
Creditors and Accruals	58,726	Unquoted	<u>21,000</u>	36,500
		Current Assets		
		Stock at cost	26,570	
		Debtors	57,140	
		Less prov. for bad debts	<u>1,040</u>	56,100
		Cash at Bank	<u>24,418</u>	<u>107,088</u>
	<u>£444,588</u>			<u>£444,588</u>

Profit and Loss Account

		Balance b/f	22,452
		Trading profit for the year	46,470
Balance c/f	70,862	Income from Investments	1,940
	£70,862		£70,862

You have received the following relevant information:

(1) The trading profit for the year ended 30 June is arrived at before charging depreciation, but after charging the following items:

Chairman's Salary	10,000
Managing Director's Salary	11,500
Sales Director's Salary	5,400
Audit Fee	750
Audit Expenses	100
Accountancy Charges	125
Rent and Rates	5,250
Bank Overdraft Interest	1,000

(2) Adjustments are to be made for:

- (a) a provision for fees of £1,250 for the chairman;
- (b) the doubtful debts provision to be adjusted to 5% on outstanding debtors;
- (c) Depreciation to be provided for the year on Motor Vehicles at 20% on cost, and on Plant and Machinery at 10% on cost;
- (d) a proposed dividend on ordinary shares at the rate of 3%;
- (e) a proposed dividend on preference shares;
- (f) Corporation tax is to be provided at 50% on profit to the nearest £500 over.

(3) The freehold land and buildings were revalued during the course of the year by AB Valuers, on an open market basis, from the original cost of £90,000 to £95,000. The resulting reserve was credited to the Asset Revaluation Reserve.

(4) Income from investments (gross) represents £1,340 from unquoted investments which the directors have valued at £23,500, and £600 from quoted investments which have a market value of £15,108.

(5) The turnover of the company for the year amounted to £497,000, being gross sales less trade discounts.

You are required to prepare, in a form suitable for presentation to the members (i) the Company's Profit and Loss Account for the year ended 30 June and (ii) a Balance Sheet as on that date.

The auditor's report, comparative figures and the directors' report are not required.

14.4 DAF Ltd produced the following draft accounts at the end of their financial year (31 May):

Profit and Loss Account

Cost of Sales	351,407	Sales	628,000
Works Expenses	82,293	Investment Income	1,200
Plant Depreciation	7,250		
Administration Expenses	42,305		
Salaries	93,500		
Sundries	6,340		
Bad Debts	2,000		
Audit Fee	1,250		
Fittings Depreciation	2,300		
Corporation Tax	15,120		
Preference Dividend paid	8,000		
Ordinary Dividend proposed	10,000		
	<u>621,765</u>		
Net Profit	7,435		
	<u><u>£629,200</u></u>		<u><u>£629,200</u></u>

Balance Sheet

Ordinary Capital	125,000	Land and Buildings	150,000
Preference Capital	100,000	Fixtures	30,850
Creditors	37,300	Debtors	71,300
Provision for doubtful debts	4,200	Cash in Hand	47
Profit and Loss a/c	28,750	Bank Balance	13,893
Corporation Tax	32,320	Stocks	84,362
Proposed Dividends	10,000	Plant	22,488
General Reserve	50,000	Investments	14,630
	<u>£387,570</u>		<u>£387,570</u>

The following information is provided:

(1) Corporation tax is the estimated amount payable on the profits for the year at 40% due 1 January after allowing for an over-provision of £1,800 in the previous year.

(2) The Profit and Loss Account includes the following salaries:

Works Director	£ 7,000
Chairman	£18,000
Managing Director	£13,200
Office Manager	£12,300.

(3) The preference shares are redeemable on 31 December 1982 at a premium of 2%.

(4) Investments comprise (a) 9% of the capital of NGB Ltd, a private company, cost £7,330 (directors' valuation £7,350), and (b) debentures in Ash Ltd, quoted on the London Stock Exchange at £8,000. The latter company had paid the necessary interest at 8%.

(5) During the year a factory had been purchased for £40,000. Fixtures purchased in year cost £3,500. There had been no disposals of or additions to plant in year. Cost of assets was:

Freehold land and buildings	£150,000
Plant and machinery	45,000
Fixtures	38,000

Plant is depreciated at 20% and Fixtures at 12½%. Freeholds are not depreciated.

You are required to prepare the company's Profit and Loss Account, Balance Sheet and notes in a form suitable for presentation to the members.

CHAPTER 15

Interpretation of Accounts

Whether the accountant works in industry or the profession, he will have to report on the results of financial transactions, such reports being for the benefit of shareholders, potential investors and the board of directors.

In order to explain the information he may have to write a descriptive report which will include a discussion of the structure of the business as well as accounting statistics. The objectives of these reports vary according to the interests of the person to whom the report is addressed; he may be writing to a prospective investor about the state of the company and its future potential or he may have to explain to the board of directors why the company is having difficulty in paying its creditors. The report may not be based on Financial Accounts but on budgeting and costing schedules or investment information. In this chapter only Financial Accounts are considered.

Characteristics of the Report

Reports may take several forms, for example a letter from a professional accountant giving advice on investment, an internal company report from the chief accountant to the managing director, or a formal report from a firm of consultants to a board of directors. Whichever type of report is being undertaken there are several structural characteristics which should be understood.

Presentation

The person to whom the report is being presented will have many other activities to attract his attention and it is probable that on receipt of the report it will be read through generally, then at a later date referred to in detail. It is therefore essential that the report is headed in a manner which accurately reflects its contents.

It should also follow some logical sequence of events, for example first giving a brief description of the existing system or history, the present problems and the likely outcome, and then ending with suggestions and recommendations. Each section of the report should be self-contained and clearly headed.

Fullness

Though succinct, a report should be a full examination of the problem and may well go beyond the purely accounting sphere, considering the use of other than

accounting knowledge. For example, economic conditions, labour relations, politics and management policy could be dealt with.

Accuracy

All reports should be accurate and verified where possible. Where values have been given by persons connected with the firm these should, if possible, be verified by third parties. The following are three examples of statements which may appear in a report: (1) 'The assets are worth £10,000 at least'; (2) 'The vendor values the asset at £10,000'; (3) 'We are told the asset is worth £10,000'.

Statement (1) is poor as the report should state the authority for the valuation; statement (2) is better as it states who valued the asset; but statement (3) is almost dishonest because it implies that the valuation has been provided by a disinterested party, which may not be the case.

Clarity and Literacy

The use of good English and the exclusion of ambiguities is essential if the author of the report wishes to be taken seriously. Adopt good plain English which is in daily use and is understood – not necessarily perfect literary prose. Technical jargon should be avoided, as should slang or colloquial expressions. The effective use of punctuation and paragraphs cannot be overemphasised.

It should be understood that reports are written for the benefit of the recipient, not the author, and terms used should therefore be those which are understood by the reader. For example, if the report is addressed to a person unfamiliar with finance the report should explain the problem in simple terms.

Contents of the report

The contents of the report will entirely depend on the reason for its being commissioned and will therefore change with the circumstances. However, when looking at a business the following distinct areas of discussion will appear:

(1) Profitability

Depending on the reason for the report this topic must be considered from the viewpoint of (a) the company, and (b) the individual shareholder. The company will be interested in the level of profitability, its comparison with past results and future potential. These can be explained by using Gross and Net Profits as a percentage of Sales and Capital Employed. The shareholder is interested in profitability as far as his holding is concerned. This can be indicated by using Net Profit and Dividends as a percentage of Ordinary Capital and the dividend received in relation to the cost and market value of his share.

(2) Liquidity

This considers the ease with which a company can meet its debts and at the same time the extent to which credit is allowed to customers. The position is clarified by considering the relationship of creditors to purchasers, of debtors to credit sales, and of availability of funds, for example the level of bank overdraft facilities.

(3) Capital Investment

This considers the effect on profitability as a result of changes in Fixed Assets and the extent to which additional capital has been used in the period under review and the effect on future profits.

(4) Long-Term Finance

This considers the manner in which the company has raised the required funds, the reason why the funds were necessary and the effect on profitability. The costs of raising the capital and its effect on dividend policy must also be considered.

(5) Management Policy

Have there been any changes in the management of the business and what overall effect have these changes had on the state of the business?

It must be emphasised that no one topic of the report should be taken in isolation. The various factors are interrelated, for example a large capital investment in Fixed Assets may have an adverse effect on profits until the assets are brought into full production.

It must also be noted that percentages and ratios must be prepared on a consistent basis, that they are only of use as a means of comparison and that no single percentage should be taken in isolation.

Profitability – The Business

This topic is best illustrated by an example:

<i>Operating statements</i>	<i>Year 1</i>	<i>%</i>	<i>Year 2</i>	<i>%</i>
	<i>£000's</i>		<i>£000's</i>	
Sales	500	100	700	100
Less Cost of Sales	<u>350</u>	70	<u>420</u>	60
Gross Profits	150	30	280	40
Expenses				
General Admin.	25	5	98	14
Selling Expenses	20	4	49	7
Directors' Remuneration	10	2	14	2
10% Debenture Interest	15	3	28	4
Depreciation	<u>20</u>	4	<u>21</u>	3
	<u>90</u>		<u>210</u>	
Net Profit	<u>£60</u>	12	<u>£70</u>	10
Capital Employed	350		350	

Gross Profit

This is normally expressed as a percentage of sales and is the amount of profit being made from trading. In the illustration it is 30% in year 1 and increases to 40% in year 2. This increase may be due to an increased selling price of goods or reduced cost of sales. Changes in volume will have no effect on gross profit percentages, as the increase in sales is matched by a proportional increase in the cost of sales. For example:

Goods Sold £600; Cost £400; Gross Profit £200; Margin 33⅓%;
 Increase in volume 100%

Goods Sold £1,200; Cost £800; Gross Profit £400; Margin 33⅓%.

In the first illustration it can be seen that the increased gross profit was entirely due to a reduction in costs from 70% of selling price in year 1 to 60% in year 2. As a general rule changes in gross profit percentage reflect a change in the structure of trading of the business or the inaccurate valuation of stocks or sales; for example, cash sales not recorded or goods misappropriated.

Net Profit

This, too, is expressed as a percentage of sales but the movement may have no connection with the movement in gross profit percentage because net profit is affected by the various expense items which do not move in proportion to sales; for example, Depreciation, Debenture Interest, Directors' Remuneration.

The illustration shows that the net profit percentage has fallen from 12% to 10% of sales, whilst the gross profit percentage rose from 30% to 40%. To ascertain the reason for this movement it will be necessary to examine every item of expense and consider it as a percentage of sales. Of particular interest in the illustration is the increase in selling expenses from 4% to 7%. This may be due to additional advertising and product promotion or to changes in distribution methods. The increase in general administration expenses from 5% to 14% may be the result of an increase in bad debts arising from the increase in sales.

Additional investigation would be necessary to establish the reason for the increase.

Return on Capital Employed

This percentage is an indication, to shareholders, of the return being earned on the funds invested. It must be considered in conjunction with the use of capital, i.e. the relationship of sales to capital employed and the return on capital in similar businesses. For the purpose of the illustration, capital employed is considered to be the proprietors' interest.

$$\frac{\text{Net Profit}}{\text{Capital employed}} \quad \begin{array}{c} \text{Year 1} \\ \frac{\pounds 60,000}{\pounds 350,000} \end{array} \times \frac{100}{1} = 17.15\% \quad \begin{array}{c} \text{Year 2} \\ \frac{\pounds 70,000}{\pounds 350,000} \end{array} \times \frac{100}{1} = 20\%$$

This indicates a more favourable use of funds, i.e. in year 1 £350,000 was used to generate £500,000 of sales, whilst in year 2 £350,000 was used to

generate £700,000 of sales. The turnover of capital employed could be expressed as follows:

	Year 1		Year 2
Sales	£500,000	= 1.43	£700,000
Capital employed	£350,000		£350,000
Net Profit % to Sales	12		10
Net Profit % to Capital Employed	17.15		20

The factor of sales to capital employed multiplied by the net profit to sales percentage will equal the net profit to capital employed. It is possible for a reduction in net profit to sales percentage to be counteracted by a more efficient use of capital. This is shown in the illustration where the use of an equivalent amount of capital generated increased sales in year 2.

The Individual

The manner in which an individual judges the profitability of an investment is now considered.

	Year 1		Year 2		%
	£000's		£000's		
Net Profit for Period	60	100	70	100	
Less Corporation Tax	24	40	28	40	
Transfer to Reserves	8	13.3	—	—	
Dividends Paid	<u>28</u>	46.7	<u>42</u>	60	
	<u>60</u>		<u>70</u>		
Balance	<u>Nil</u>		<u>Nil</u>		
Share Capital £1 Ordinary Shares	£350		£350		
Cost per Share	£1.60		Market value £2.00		

		Year 1		Year 2
Dividend	x 100 1	£28,000	= 8%	£42,000
Ordinary capital		£350,000		£350,000

It should be noted that in year 1 the shareholder received 46.7% of the available profits, a dividend of 8%, whilst in year 2 he received 60% of the available profit, a dividend of 12%. This is explained by the fact that the dividend rose by 50% (from 28 to 42) whilst profits only rose by 16.6% (from 60 to 70) and therefore the dividend paid in year 2 must have used more of the available profits.

Investment Yield

This represents the dividend expressed as a percentage of the cost or market value. On the basis of one share which cost £1.60 the yield is calculated as

$$\frac{\text{Dividend paid on nominal value of share}}{\text{Cost per share}} \times 100 = \frac{8\text{p}}{160\text{p}} \times \frac{100}{1} = 5\%$$

The yield per share would be 5%. However, if more shares were to be purchased at the current market price of £2.00 the dividend would then be expressed as a potential yield of

$$\frac{\text{Dividend per share}}{\text{Market value}} \times \frac{100}{1} = \frac{8\text{p}}{200\text{p}} \times \frac{100}{1} = 4\%$$

This return would be compared with shares in similar companies before comment could be made upon their value. It should be noted however that whilst the dividend paid shows an increase from 8% to 12%, the yield shows a reduction of 1% which is due to the increased market price.

Liquidity

This section of the topic will be discussed by considering the following accounts:

	<i>Balance Sheet</i>		
	<i>Year 1</i>		<i>Year 2</i>
	£000's		£000's
<i>Fixed Assets</i>			
F'hold at Cost	200		400
Plant Cost	700	1,300	
Depreciation	<u>400</u>	<u>500</u>	
	300		800
	<u>500</u>		<u>1,200</u>
Stock	500	700	
Debtors	875	1,000	
Deposits	<u>200</u>	<u>100</u>	
	1,575	1,800	
Less			
Creditors	700	475	
Bank Overdraft	<u>175</u>	<u>725</u>	
	<u>875</u>	<u>1,200</u>	
Working Capital	700		600
	<u>£1,200</u>		<u>£1,800</u>
<i>Capital</i>			
Ordinary Shares	1,000		1,000
10% Debentures	—		500
Retained Profits	200		300
	<u>£1,200</u>		<u>£1,800</u>

Trading and Profit and Loss Account

	<i>Year 1</i> £000's		<i>Year 2</i> £000's
Sales Credit	7,000		4,000
Cash	<u>1,000</u>		<u>3,200</u>
	8,000		7,200
Opening Stock	300		500
Purchases	4,200		3,800
Closing Stock	<u>(500)</u>		<u>(700)</u>
Cost of Sales	4,000		3,600
<i>Gross Profit</i>	4,000		3,600
Expenses	3,830		3,350
Debenture Interest	—		50
Depreciation	<u>120</u>		<u>100</u>
	<u>3,950</u>		<u>3,500</u>
Retained Earnings	<u>£50</u>		<u>£100</u>

The company's bank overdraft has risen considerably during the course of year. This may well be due to the increase in debtors, although the company experienced a fall in credit sales. At the same time the company has apparently had to reduce its creditors. Investment in other assets will also have contributed to the change in the bank balance.

The management of the business can be investigated by the use of selected ratios as follows:

Creditors/Purchases

This will indicate the amount of time taken as credit from suppliers, and can be shown either as a straight ratio or expressed in terms of weeks or months of credit. For example:

	<i>Year 1</i>		<i>Year 2</i>
$\frac{\text{Purchases}}{\text{Creditors}}$	$\frac{£4,200}{£700} = 6:1$		$\frac{£3,800}{£475} = 8:1$

In year 1, 1/6th of the purchases had not been paid for, in year 2 this proportion had fallen to 1/8th. As the accounts cover a 12-month period the proportion of unpaid purchases can easily be expressed in months, for example:

	<i>Year 1</i>		<i>Year 2</i>
Ratio	6:1		8:1
Accounting Period	12 months		12 months
∴ Credit Period	2 months		1½ months

Thus the business is settling its outstanding accounts at a faster rate than previously. The Balance Sheets did not show this.

The credit period taken from suppliers should be compared with the credit period allowed to customers.

Debtors/Credit Sales

Cash sales should be excluded from this calculation as these cannot result in outstanding debts:

	<i>Year 1</i>		<i>Year 2</i>	
<u>Credit Sales</u>	<u>£7,000</u>	8:1	<u>£4,000</u>	4:1
Debtors	875		1,000	
i.e.		1½ mths.		3 mths.

The business is extending the period of credit given to customers. The result of the change in the purchase and sales credit periods will be a restriction on available funds. This overlap of credit periods will have to be financed, probably by a bank overdraft.

Composition of Creditors and Debtors

Although the terms of credit have been calculated other factors must be borne in mind:

- (1) The periods calculated are average only for the whole of creditors and debtors.
- (2) The precise age of individual accounts should be known:

	<i>Co. A</i>	<i>Co. B</i>
Credit Period	3 mths.	3 mths.
Debtors: 1 mth. old	2,000	10,000
2 mths. old	8,000	8,000
3 mths. old	<u>10,000</u>	<u>2,000</u>
	£20,000	£20,000

Company A will anticipate the receipt of £10,000 in the near future while Company B, showing exactly the same credit period and total debtors, can only anticipate the receipt of £2,000 in a similar period.

(3) The importance of an individual debt to the total figure. If, in the second year, debtors of £1 m. represented three months' credit and a single customer owed £½ m. this is significant because it represents 1½ mths. sales. A change of policy by this customer on the placing of future orders or its terms of payment could have considerable effect on the future cash position.

Allowance must also be made for economic conditions and the ability of customers to pay; for example in times of trade restraints the facility with which customers can obtain overdrafts may be restricted.

Liquid Assets

The liquidity of a company can also be tested by a comparison between creditors and liquid assets.

Creditors in this context will usually include trade creditors, proposed dividends, current taxation and overdrafts. Liquid assets will include those assets readily realisable as cash, which under normal circumstances would be trade debtors and bank balances.

	<i>Year 1</i>	<i>Year 2</i>
Debtors	875	1,000
Creditors	700	475
Overdraft	<u>175</u>	<u>720</u>
	<u>£875</u>	<u>£1,200</u>
Liquidity ratio	1:1	1:1.2

In year 1 the company was able to meet its immediate cash requirements but did not have a surplus. In year 2 the position has worsened in that the company is unable to meet its creditors from liquid assets; for every £1.20 owed the company only has £1 available.

When considering this ratio the terms and extent under which an overdraft was granted must be borne in mind. If the overdraft is permanent it is unlikely that a request for immediate total repayment would be made, and it should be excluded from the liquidity ratio.

When considering the degree of pressure creditors can apply to a company, unused overdraft facilities should be borne in mind. In the illustration, for example, it may well be that the company is able to call on a further £500 overdraft facilities in order to settle the creditors.

Stock turnover as an aspect of liquidity concerns the manner in which funds have been applied in the purchase and manufacture of stocks and the rate at which stocks have been used.

The rate of turnover is obtained by comparing stocks to cost of sales and is expressed in weeks or months of turnover. Where there have been large movements during the course of a year it is advisable to take the average of opening and closing stocks.

	<i>Year 1</i>	<i>Year 2</i>
Opening Stock	300	500
Closing Stock	500	700
Average Stock	400	600
Cost of Sales	4,000	3,600
Ratio	10:1	6:1
Accounting Period	12 months	12 months
∴ Period for which stock held	1.2 months	2 months

These figures show that in the second year stock has turned over at a slower rate. This may be due to a number of factors; for example, (a) a build up of

obsolete stock; (b) a build up of stocks for planned expansion; (c) the loss or contraction of the market – this is particularly probable where there has been a disproportionate rise in finished goods.

Comparison of the rate of turnover of the differing types of stock may reflect changes in the sales markets.

	<i>Co. A</i>	<i>Co. B</i>
Raw Materials	60,000	5,000
Work in Progress	10,000	15,000
Finished Goods	30,000	80,000
	<u>£100,000</u>	<u>£100,000</u>

It is assumed that the companies operate a similar business. Although Company A will have to obtain funds to pay for their raw materials this will be recovered when the goods are sold. Large stocks of raw materials may indicate an expanding business, particularly where finished goods are a small proportion of total stocks.

Company B, however, will require few funds to pay for raw materials. The extent to which finished goods form a large proportion of total stocks may indicate unsaleable products or contraction of markets.

Capital Investment

When a business invests in new fixed assets, in order to expand or modernise, the immediate effect is a reduction in profits due to increased depreciation charges. This will subsequently be offset by increased revenue when the assets are brought into full production. The source of funds from which these assets were purchased should be examined. In the illustration, £500,000 10% debentures were issued while £800,000 was expended on fixed assets; the additional sum (£300,000) must have been provided from working capital and profits.

Long-Term Finance

When a company wants to raise funds it must consider the effect on the capital structure and future profits.

	<i>Co. A</i>	<i>Co. B</i>
Ordinary Shares	1,000	500
10% Debentures	500	1,000
	<u>£1,500</u>	<u>£1,500</u>
Profit before Debenture		
Interest	150	150
Available for Ordinary Shareholders after Debenture		
Interest	100	50
Maximum Dividend	10%	10%

Company A will be able to raise a further £500 in debentures and leave profits equivalent to a 5% dividend, whilst the raising of a similar amount by Company B will eliminate available profits. It should also be appreciated that although a company may have sufficient profits to pay additional dividends it may not wish to increase its share capital, as this may involve a loss of control by existing management.

Management Policy

This covers such matters as the effect of changes in management, trading policies and accounting policies. Accounting policies would include such items as deferred revenue expenditure, for example the carrying forward of research and development charges as an item in the Balance Sheet, and a change in calculating profit under hire purchase transactions. Both of these changes may result in increased profits, as (a) expenditure has not been charged against revenue and (b) stock valuations have been adjusted.

Funds Flow

As an additional method of examining the management of the business a statement showing the sources of the company's funds and the manner in which they have been used can be prepared.

The funds of a business are derived from cash and credit transactions. Although the Profit and Loss Account will show one source of funds it will not show the cash generated because it includes items normally considered as expenses but not represented by outflows of cash or credit, for example, the depreciation of fixed assets, although an expense in the Profit and Loss Account is not a payment of cash or a credit transaction in the financial period under review. The outflow of funds occurred when the fixed assets were purchased.

In order to prepare a Funds Flow statement it is necessary to compare the Balance Sheets of a business at the conclusion of two consecutive financial periods, and the following items will be of assistance:

Sources of Funds	Applications of Funds
Introduction of New Capital	Reduction of Capital
Increases in Reserves	Reduction of Reserves
Increases in Liabilities	Reduction of Liabilities
Reductions in Assets	Increases in Assets

Note: Reserves will include the unappropriated balance on the Profit and Loss Account.

Consider the following illustration:

<i>Balance Sheet</i>				
	<i>1 Jan.</i>	<i>31 Dec.</i>	<i>Source</i>	<i>Application</i>
Fixed Assets	2,000	2,500		500
Stock	300	350		50
Debtors	1,500	1,050	450	
Cash	400	700		300
	<u>4,200</u>	<u>4,600</u>		
Less Creditors	700	600		100
	<u>£3,500</u>	<u>£4,000</u>		
Proprietor's Interest				
Capital	3,000	3,000	—	—
Profit or Loss	500	1,000	500	
	<u>£3,500</u>	<u>£4,000</u>	<u>£950</u>	<u>£950</u>

The usual question asked is 'why has cash only risen by £300?' The information would be summarised in the following manner:

<i>Funds Flow Statement</i>		
Sources		
Profit Earned	500	
Reductions in Debtors	<u>450</u>	
		950
Applications		
Increase in Fixed Assets	500	
Increase in Stock	50	
Reduction in Creditors	<u>100</u>	<u>650</u>
Increase in Cash		<u><u>£300</u></u>

Consideration will now be given to the following transactions: (1) sale of assets; (2) depreciation of assets; (3) capital and loan issues; (4) preliminary expenses

<i>Balance Sheet</i>			
	1 Jan.	31 Dec.	
Plant, Cost	5,000	5,000	
Less Depreciation	2,300	3,100	800
	2,700	1,900	
Investments at cost	200	—	200
Net Current Assets	2,800	18,800	16,000
Debenture Discount	—	1,000	1,000
Preliminary Expenses	300	100	200
	£6,000	£21,800	
Capital	5,000	15,000	10,000
Share Premium	—	500	500
Profit and Loss	1,000	1,300	300
Debentures	—	5,000	5,000
	£6,000	£21,800	£17,000

Notes:

(1) The share issue carried a premium of 5%, while the debentures were issued at a discount of 20%.

(2) There was a profit on the sale of investments of £500. This had been credited to the Profit and Loss Account.

(3) £200 of the preliminary expenses together with £800 depreciation had been charged to the Profit and Loss Account.

In order to prepare the Funds Flow statement the following preliminary workings are necessary:

Disposal of Investments

The source of funds only shows the cost of the asset sold, whereas the funds statement must indicate sale proceeds:

<i>Investments</i>			
Balance b/d (Cost)	200	∴ Cash received on sale	700
Profit on Sale	500		
	£700		£700

Profit and Loss Account

Depreciation and preliminary expenses are shown as sources of funds on the initial workings, although no new funds have been introduced. Those items have in fact been charged to the Profit and Loss Account. To this extent the £300 increase in profits is after charging £800 depreciation and £500 preliminary expenses. The funds generated were £1,300 (£300 Profit, £800 Depreciation, £200 Preliminary Expenses) but this figure includes the £500 profit earned on sale of investments which is part of the total source of funds (£700) from the sale.

Calculation of Profit

Increase per Balance Sheet	300
Add back Depreciation	800
Preliminary Expenses	200
	1,300
Deduct profit on Investment sold	500
Total Funds generated from Operations	£800

Funds Flow Statement

Sources	
Increase in Capital (Including premium)	10,500
Increase in Debentures (deducting discount)	4,000
Sale of Investments	700
Profit earned from Operations	800
	16,000
 Applications	
Increase in Net Current Assets	16,000

Consideration will now be given to the following transactions: (1) disposal of depreciated assets (plant, freehold); (2) revaluation of assets; (3) taxation and dividends.

Balance Sheet

	<i>1 Jan.</i>	<i>31 Dec.</i>	<i>Sources</i>	<i>Appl.</i>
Fixed Assets				
Freehold Land	50,000	80,000		30,000
Plant	20,000	15,000	5,000	
Less Depreciation	<u>12,000</u>	<u>11,000</u>		1,000
	8,000	4,000		
	<u>58,000</u>	<u>84,000</u>		
Current Assets				
Stock	3,000	2,500	500	
Debtors	2,800	3,400		600
Bank	<u>4,000</u>	—	4,000	
	9,800	5,900		
	<u>67,800</u>	<u>89,900</u>		
Less Current Liabilities				
Creditors	3,500	4,200	700	
Taxation	2,000	2,400	400	
Proposed Dividend	1,000	1,200	200	
Overdraft	<u>—</u>	<u>6,000</u>	6,000	
	6,500	13,800		
	<u>£61,300</u>	<u>£76,100</u>		
Capital	50,000	50,000	—	—
Profit and Loss a/c	<u>11,300</u>	<u>26,100</u>	14,800	—
	<u>£61,300</u>	<u>£76,100</u>	<u>£31,600</u>	<u>£31,600</u>

Notes:

(1) The freehold was revalued during the year and the capital profit of £30,000 has been credited to the Profit and Loss Account.

(2) Plant costing £5,000 with a net book value of £1,000 had been sold for £800; the loss on sale has been charged to the Profit and Loss Account.

(3) The taxation and proposed dividends outstanding at 1 January were paid during the year.

Preliminary Workings

Disposal of Plant

This will involve adjustments for cost, depreciation and profit or loss on disposal.

Plant

<table border="0"> <tr> <td style="width: 50%;">Balance b/f</td> <td style="text-align: right;">20,000</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>20,000</u></td> </tr> <tr> <td>Balance b/f</td> <td style="text-align: right;">15,000</td> </tr> </table>	Balance b/f	20,000		<u>20,000</u>	Balance b/f	15,000	<table border="0"> <tr> <td style="width: 50%;">Balance c/f</td> <td style="text-align: right;">15,000</td> </tr> <tr> <td>∴ Cost of Disposal</td> <td style="text-align: right;"><u>5,000</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>£20,000</u></td> </tr> </table>	Balance c/f	15,000	∴ Cost of Disposal	<u>5,000</u>		<u>£20,000</u>
Balance b/f	20,000												
	<u>20,000</u>												
Balance b/f	15,000												
Balance c/f	15,000												
∴ Cost of Disposal	<u>5,000</u>												
	<u>£20,000</u>												

Depr. Res.

Balance c/f	11,000	Balance b/f	12,000
Written back on disposal (£5,000 – £1,000)	4,000	∴ Charge to P and L	3,000
	<u>£15,000</u>		<u>£15,000</u>
		Balance b/f	11,000

Disposal A/C

Cost	5,000	Depr.	4,000
		Cash	800
		∴ Loss on Sale	200
	<u>£5,000</u>		<u>£5,000</u>

The funds statement will show a source of funds £800 from the disposal of plant. This will be reconciled with the net source of £4,000 shown in the illustration, as follows:

Cash Received	£800
Loss on Sale	200
Depreciation charge for year	3,000
Net Movement	<u>£4,000</u>

The Profit and Loss Account will be adjusted by adding back the loss on sale and the depreciation charged in the period.

Taxation and Proposed Dividends

The accounts will appear as follows:

Taxation

Cash paid in year	2,000	Balance b/f	2,000
Balance c/d	2,400	∴ Appropriation Profit	2,400
	<u>£4,400</u>		<u>£4,400</u>
		Balance b/d	2,400

Proposed Dividend

Dividends

Cash paid	1,000	Balance b/d	1,000
Balance c/d	1,200	∴ Appropriation in P. and L.	1,200
	<u>£2,200</u>		<u>£2,200</u>
		Balance b/d	1,200

The funds statement will show the tax and dividends paid as an application of funds and the appropriations of profit as a source of funds, which is incorporated in the total funds generated from trading. The Balance Sheet comparison shows the net movement of cash paid and profit appropriation.

Profit and Loss Account

The source of profit £14,800 arises after crediting the £30,000 capital profit arising on revaluation. This is not a source of funds, as no additional cash has flowed into the business, and must be eliminated from the calculation of funds generated. The movement on freehold land of £30,000 is not a true application as funds have not flowed out of the business.

Calculation of Profit

Increase per Balance Sheet	14,800
Add Back: Depreciation	3,000
Loss on Sale	200
Taxation	2,400
Proposed Dividend	1,200
	21,600
Less Capital Profit	30,000
∴ Loss on Operations	£8,400

Funds Flow Statement

Sources

Sale of Plant	800	
Reduction in Stock	500	
Reduction in Bank and Increase in Overdraft	10,000	
Increase in Creditors	700	
		12,000

Applications

Increase in Debtors	600	
Taxation paid	2,000	
Dividend paid	1,000	
Loss on operations	8,400	
		12,000

A Funds Flow statement should provide information as to how the business obtained its funds, how such funds were used during a financial period and the extent, if any, to which third parties have increased their interest in the business.

A business will obtain funds from (1) trading activities; (2) creation of new capital; (3) raising of loans; (4) disposal of obsolete assets; (5) taking of extended credit from suppliers.

The funds so obtained will be utilised in (1) repaying Capital and loans; (2) purchasing of fixed assets; (3) cost of investing in subsidiary and associated companies; (4) allowing extended credit to be taken by customers.

Examination of the statement will provide an insight into future trends such as increased depreciation arising from purchase of additional assets, additional interest charges on new loans and the need to obtain overdraft facilities to repay creditors, where the increase has not been matched by at least a corresponding increase in debtors.

A funds statement will not indicate changes in capital structure as a result of the exchange of debentures for shares or the issue of shares for assets other than cash.

Salient features of Statement of Standard Accounting Practice 10

Statements of sources and applications of funds

(1) The Profit and Loss and Balance Sheets do not show the effect of movement in the assets, liabilities and capital in the year, on liquid funds.

(2) Statement shows how operations are financed, distinguishing between purchase of fixed assets and changes in working capital.

(3) Movements in fixed assets should be shown gross. Figures in the funds statements should be identifiable with Profit and Loss and Balance Sheets.

(4) The Funds Statement should be part of the audited accounts.

Terminology

Net liquid funds: cash at bank and in hand, less overdrafts.

Investments: considered to be current assets.

Statement of Source and Application of Funds

	This Year		Last Year		
	£'000	£'000	£'000	£'000	£'000
<i>Source of Funds</i>					
Profit before tax			XXXX		XXX
Adjustment for items not involving the movement of funds:					
Depreciation			<u>XXX</u>		<u>XXX</u>
<i>Total Generated from Operations</i>			XXXX		XXX
<i>Funds from Other Sources</i>					
Issue of shares for cash			<u>XXX</u>		<u>XX</u>
			XXXX		XXX
<i>Less Application of Funds</i>					
Dividends paid		(XXX)		(XXX)	
Tax paid		(XXX)		(XXX)	
Purchase of fixed assets		<u>(XXX)</u>		<u>(XXX)</u>	
			<u>(XXXX)</u>		<u>(XXX)</u>
Change in Working Capital			<u>XXX</u>		(XX)

Increase/Decrease in

Working Capital

Increase in stocks	XX		XXX
Increase in debtors	XXX		XX
Increase/decrease in creditors – excluding taxation and proposed dividends	XXX		(XXX)
Movement in net liquid funds: Increase (decrease) in:			
Cash balances	(X)		XX
Short-term investments	<u>XX</u>		<u>(XX)</u>
		<u>XX</u>	
Change in Working Capital		<u>XXX</u>	<u>(XX)</u>

Questions

15.1

Balance Sheets as at

	<i>1 Jan.</i>	<i>31 Dec.</i>
Fixed Assets		
Cost less Depreciation	120,000	160,000
Current Assets		
Stock	240,000	260,000
Debtors	160,000	210,000
Cash	<u>40,000</u>	<u>28,000</u>
	440,000	498,000
Less Current Liabilities		
Creditors	90,000	128,000
Taxation	<u>10,000</u>	<u>—</u>
	<u>100,000</u>	
	340,000	370,000
	<u>£460,000</u>	<u>£530,000</u>
Share Capital	300,000	300,000
Reserves and Undistributed Profits	150,000	170,000
9% Debenture Loan	<u>10,000</u>	<u>60,000</u>
	<u>£460,000</u>	<u>£530,000</u>

You are required to (1) provide a Movement of Funds Statement; (2) explain what additional information might be useful and how it would improve the accuracy of the statement.

15.2

Balance Sheets as at

Assets	<i>1 Jan.</i>		<i>31 Dec.</i>
Fixed Assets at Cost	580		710
Less Depreciation	<u>260</u>		<u>310</u>
		320	400
Trade Investments		<u>40</u>	<u>30</u>
		360	430
Current Assets			
Stock	70		110
Debtors	120		140
Cash	<u>30</u>		<u>25</u>
	220		275
Current Liabilities			
Creditors	60		100
Taxation	15		20
Dividends	<u>5</u>		<u>10</u>
	<u>80</u>		<u>130</u>
		140	145
Net Current Assets	<u>£500</u>		<u>£575</u>
Share Capital	140		160
Reserves	260		220
Profit and Loss Account	<u>100</u>		<u>195</u>
	<u>£500</u>		<u>£575</u>

Notes:

(1) There was a profit of £20 on the sale of investments which had been credited to the reserves.

(2) There was a stock loss of £60 relating to prior year written off against the reserves.

(3) Plant costing £50 had been sold at a loss of £5 which was charged to the Profit and Loss Account (NBV £30).

You are required to (1) prepare a movement of Funds Statement; (2) discuss the state of the company – what additional information is required?

15.3 The following Balance Sheets for Basildon Co. were circulated to the board:

Balance Sheet as at

	<i>1 Jan.</i>	<i>31 Dec.</i>
Fixed Assets (at cost)	5,000	5,000
Freehold Land and Building		
Plant	<u>2,000</u>	<u>5,000</u>
	7,000	10,000
Less Depreciation	<u>2,600</u>	<u>3,000</u>
	4,400	7,000
Investments		
(Market value 31 Dec. £750	<u>2,000</u>	<u>2,000</u>
1 Jan. £2,500)		
	6,400	9,000
Current Assets		
Stock: Raw Materials 800	1,000	
Finished Goods 500	<u>2,500</u>	
	1,300	
Debtors	3,000	3,500
Balance at Bank	<u>2,200</u>	<u>100</u>
	6,500	7,100
Current Liabilities		
Creditors	3,000	4,500
Taxation	900	1,800
Proposed Ordinary and Preference Dividends	<u>—</u>	<u>500</u>
	3,900	6,800
Net Current Assets	2,600	300
	<u>£9,000</u>	<u>£9,300</u>
Share Capital		
Ordinary Shares	4,000	4,000
6% Preference Shares	—	1,000
Reserves	2,500	1,000
Profit and Loss Account	<u>2,500</u>	<u>3,300</u>
	<u>£9,000</u>	<u>£9,300</u>

Notes:

(1) Stocks have been valued at cost on 1 January, whereas at 31 December they included 20% overhead addition.

(2) A contingent liability at 1 January of £1,500 was settled during the year and charged to reserves.

You are asked to write a report to the managing director, who is unfamiliar with accounts, indicating the financial problems that are likely to arise in the near future. The report should include a Funds Flow Statement and suggestions as to the manner in which any problems arising could be overcome.

15.4 The following is the Balance Sheet and Profit and Loss Account of Scene Ltd and has been sent to you from a shareholder. He also says that at the Annual General Meeting in January new directors were elected on their promise to pay a dividend and improve the state of the company.

Balance Sheet as at

	<i>1 Jan.</i>	<i>31 Dec.</i>
Fixed Assets (cost less Depn.)		
Fittings	8,000	6,000
Machinery	6,000	7,000
Freehold Land	11,000	—
Current Assets		
Stock	10,000	40,000
Debtors	30,000	60,000
Cash	15,000	500
	55,000	100,500
	80,000	113,500
Less Current Liabilities		
Creditors	20,000	12,500
Bank Overdraft	—	35,000
	20,000	47,500
	£60,000	£66,000
Share Capital		
50,000 Ordinary Shares of £1 each, authorised, issued and fully paid.	50,000	50,000
Reserves	10,000	16,000
	£60,000	£66,000

Profit and Loss Account

Sales		120,000	240,000
Opening Stock	10,000	10,000	
Purchases	80,000	150,000	
	<u>90,000</u>	<u>160,000</u>	
Less Closing Stock	10,000	40,000	
		<u>80,000</u>	<u>120,000</u>
Gross Profit		40,000	120,000
Selling Expenses	6,000	12,000	
Administration Expenses	16,000	60,000	
Directors' Emoluments	10,000	35,000	
Depreciation: Fittings	2,000	2,000	
Machinery	1,000	—	
		<u>35,000</u>	<u>109,000</u>
Net Profit		5,000	11,000
Less: Dividend Paid 10%	—	5,000	
Transfer to Reserves	<u>5,000</u>	<u>6,000</u>	
		<u>5,000</u>	<u>11,000</u>

You are required to write a report to Mr Jones, the shareholder, explaining the events of the past year, the present state of the company and suggesting ways it could be improved, drawing reasonable inferences from the figures and information given.

15.5 On 1 January the whole issued share capital of File Ltd a firm of tea importers, was acquired by B.R. and M.D., who became directors of the company in place of the former directors, who retired. In March the company opened a department which hired out catering equipment. The following are the summarised Balance Sheets of the company.

Balance Sheet as at

	1 Jan.	31 Dec.
Freehold Property at Cost	4,600	8,200
Motor Car at Cost	—	1,290
Goodwill	5,000	5,000
Stock at Cost	10,840	12,360
Debtors	2,000	3,000
Bank	<u>6,150</u>	<u>—</u>
	18,990	15,360
Goods on Hire at Valuation	<u>—</u>	<u>25,200</u>
	28,590	55,050
Less Current Liabilities		
Creditors	7,620	15,480
Overdraft	<u>—</u>	<u>12,000</u>
	7,620	27,480
	<u>£20,970</u>	<u>£27,570</u>
Issued Share Capital	12,000	12,000
Profit and Loss a/c	8,970	9,570
Debentures	<u>—</u>	<u>6,000</u>
	<u>£20,970</u>	<u>£27,570</u>

You are given the following particulars:

Sales	84,000	80,000
Income from Hire	—	30,400
Expenses Charged in the Profit and Loss a/c		
Directors' Fees	1,800	4,900
Other Expenses including Depn.	12,000	13,700
Depn. on Equipment on Hire	—	8,400
Net Profit per Profit and Loss a/c	7,200	600

(1) The estimated market value of the freehold properties at 31 December was £11,400.

(2) The debentures are secured by a mortgage on the freehold properties.

(3) The bank overdraft limit is £12,000.

(4) All expenses, apart from depreciation, are apportioned equally between the two types of business.

(5) The capital cost of goods on hire was £33,600.

You are required to provide a report on the position of the company and the policy of the directors, drawing reasonable inferences from the figures and information given above.

15.6 The following Balance Sheets of a company are provided and you are required to report on the state of the business and to give an opinion as to whether a request for an increase in the overdraft to £35,000 should be granted.

<i>Balance Sheet as at</i>			
	<i>1 Jan.</i>		<i>31 Dec.</i>
Freehold Premises		35,000	50,000
Vehicles at Cost Less Depn.		16,000	14,000
Stocks	65,200		88,600
Debtors	<u>46,600</u>		<u>60,100</u>
		<u>111,800</u>	<u>148,700</u>
		162,800	212,700
Less Current Liabilities			
Creditors	50,200		89,000
Taxation	26,700		21,900
Bank Overdraft	<u>3,500</u>		<u>17,000</u>
		<u>80,400</u>	<u>127,900</u>
		<u>£82,400</u>	<u>£84,800</u>
Capital		61,000	61,000
Reserves		<u>21,400</u>	<u>23,800</u>
		<u>£82,400</u>	<u>£84,800</u>

The following information is provided:

(i) Extract from the Profit and Loss a/c	<i>Last yr.</i>	<i>This yr.</i>
Sales	466,000	480,800
Depreciation: Vehicles	9,000	3,000
Directors' Remuneration	6,000	12,000
Selling prices were increased by 5% on 1 January.		

(ii) Stocks were summarised as follows:

		<i>1 Jan.</i>		<i>31 Dec.</i>	
Product	A	Cost	Market Value	Cost	Market Value
	B	36,300	44,800	43,600	52,000
	C	28,900	25,600	23,400	31,800
		—	—	21,600	10,200
		<u>£65,200</u>	<u>£71,400</u>	<u>£88,600</u>	<u>£94,000</u>

(iii) Cost of Sales was:	<i>Last year</i>	<i>This year</i>
	£323,000	£332,600

(iv) Net profit before tax last year amounted to £37,800.

Flow Charts and Diagrams

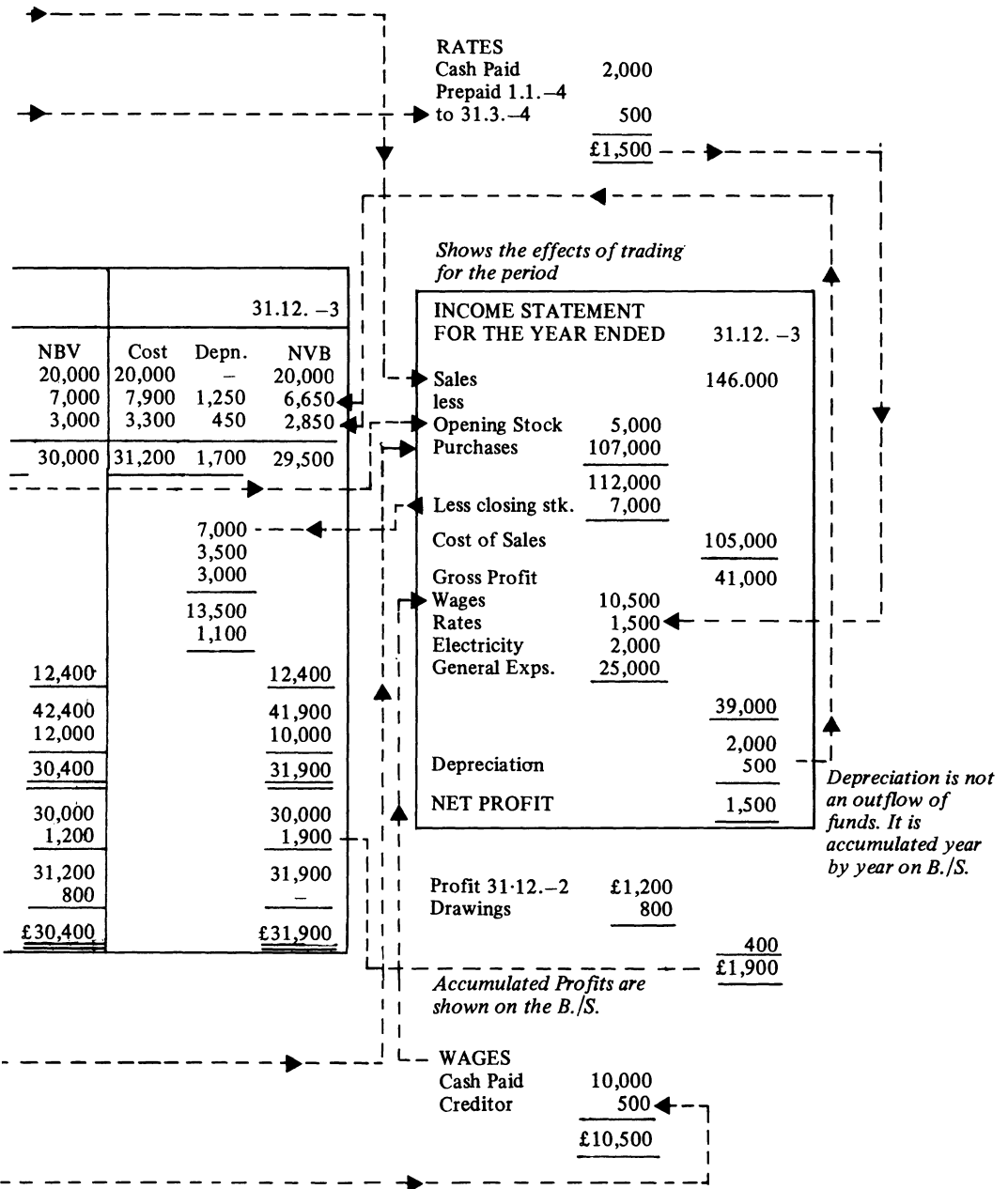


Figure A.2 Division of company control

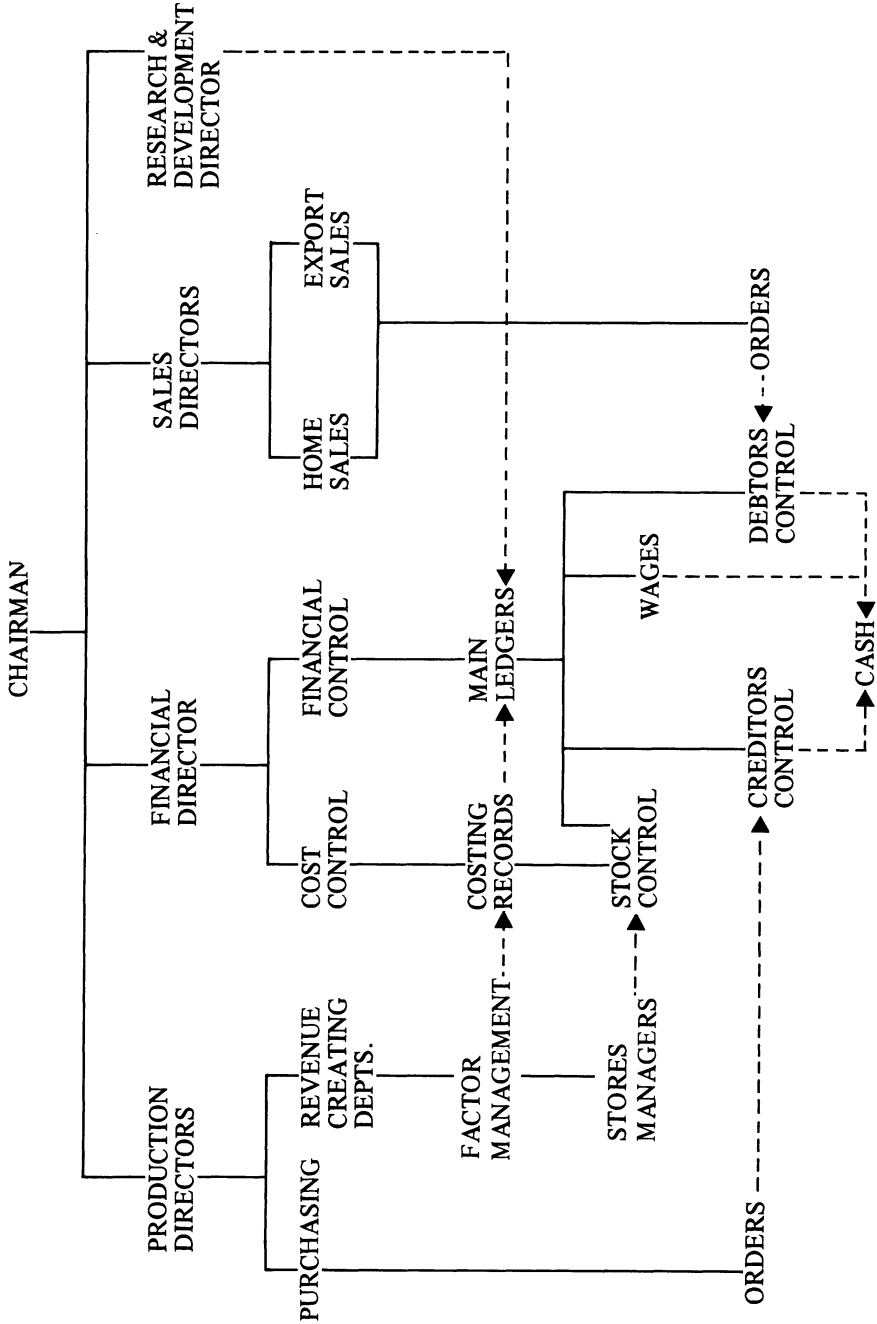


Figure A.3 Inputs to a master budget

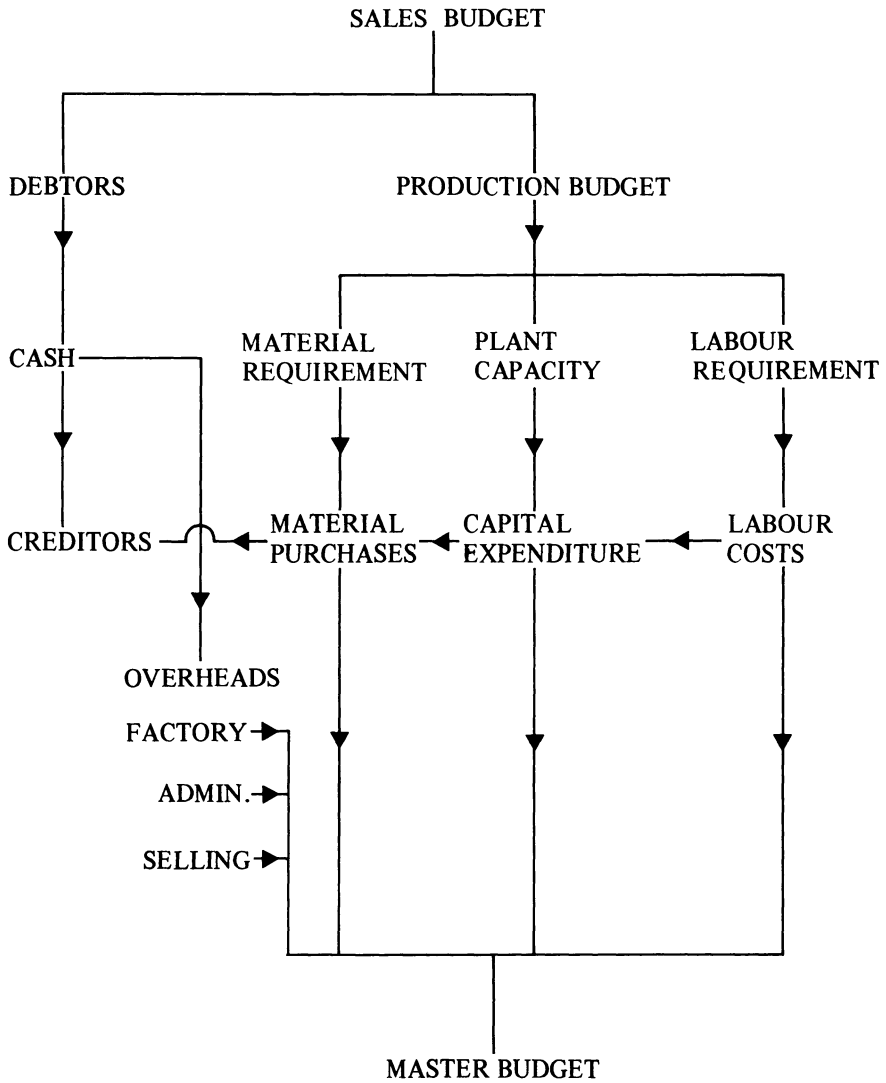
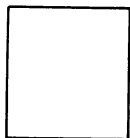
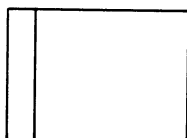


Figure A.4 (a)–(e) Information flow diagrams

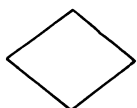
SYMBOLS



Documents



Accounts
Ledgers



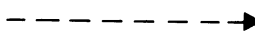
Checking
verification



File 'T' Temporary
'A' Alphabetical



Document Flow



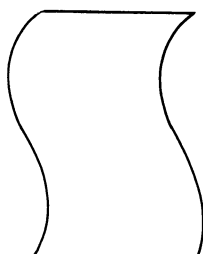
Information Flow



Cost control connection



Main Ledger connection



Regularly Produced
Reports – Monthly
– Weekly
– Yearly

Figure A.4 (b) Wages

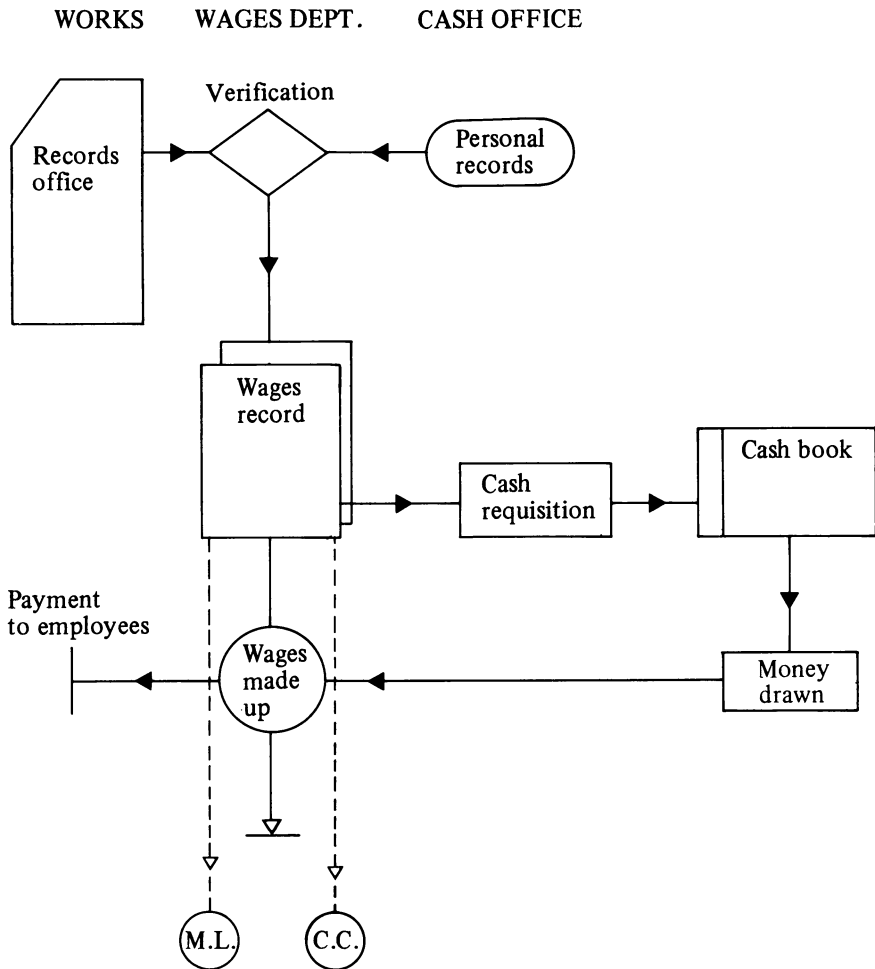


Figure A.4 (c) Purchasing

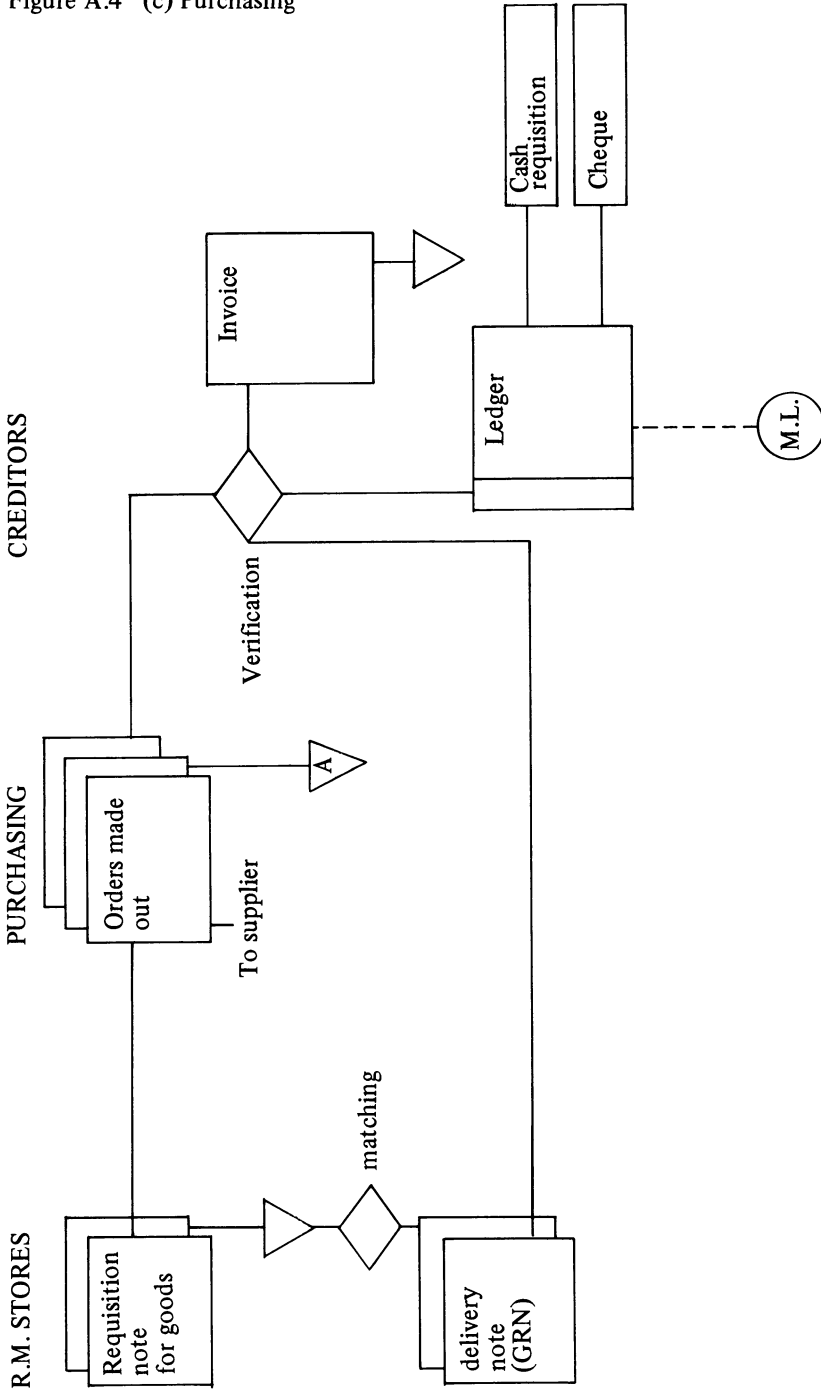


Figure A.4 (d) Sales system

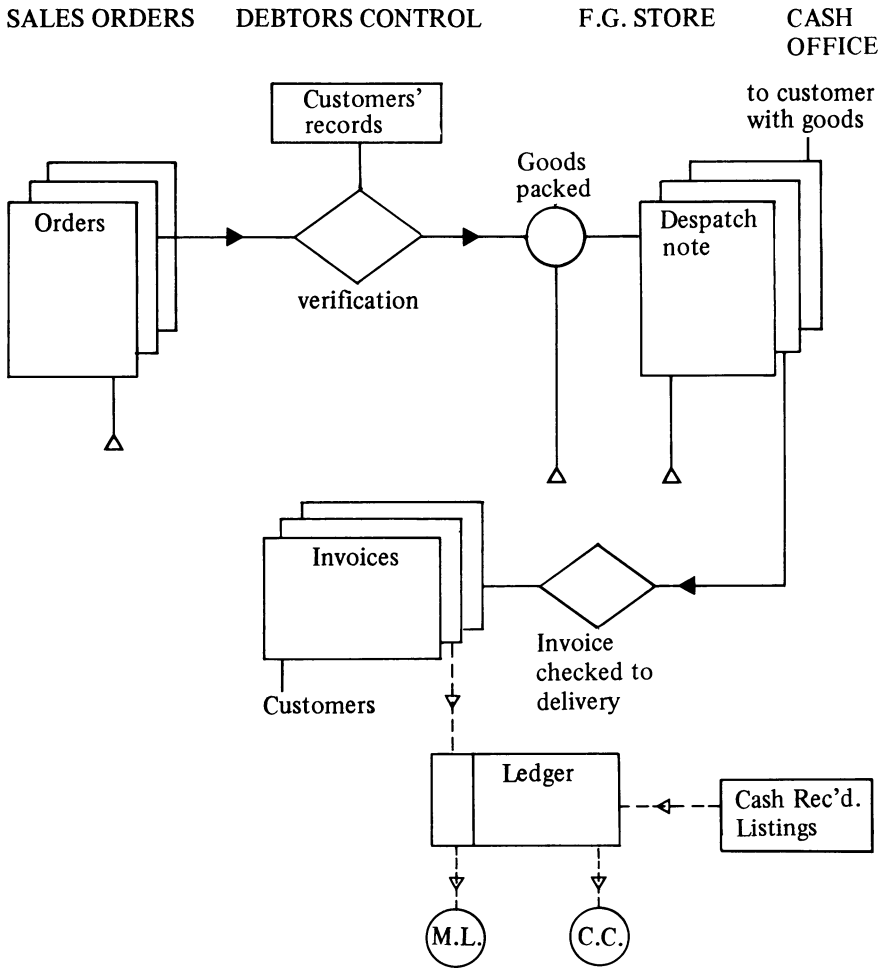


Figure A.4 (e) Cash system

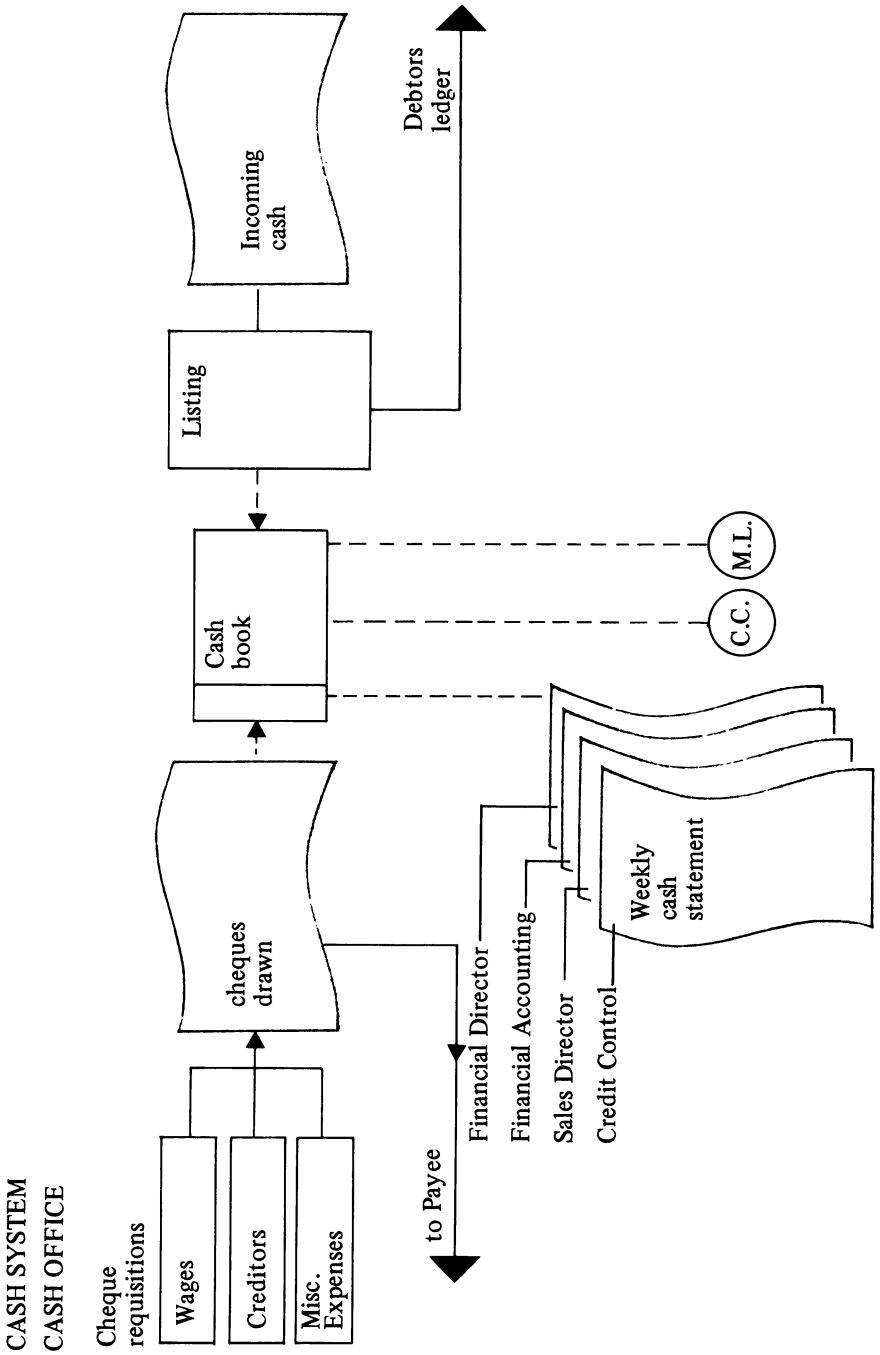


Figure A.5 Cash statement

WEEKLY CASH STATEMENT. DATE			
	ACTUAL	BUDGET	FORECAST
INCOME Debtors Others:			
PAYMENTS Creditors Wages Interest Dividends Others:			
WEEKLY MOVEMENTS			
BALANCE AT COMMENCEMENT			
BALANCE AT CLOSE			
FROM: CHIEF CASHIER	TO: FINANCIAL DIRECTOR FINANCIAL ACCOUNTANT SALES DIRECTOR CREDIT CONTROL		

Figure A.6 Cost and financial control

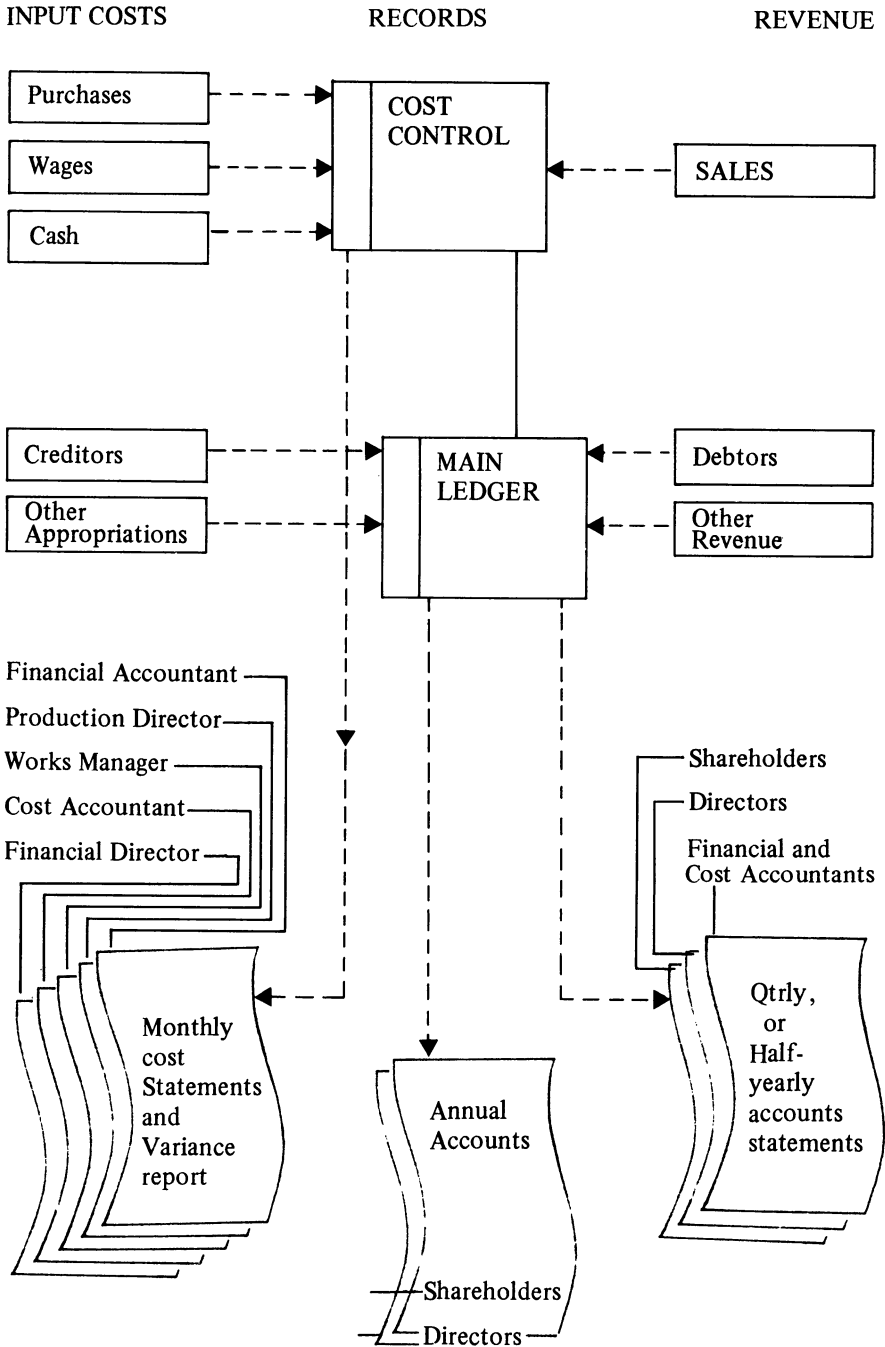
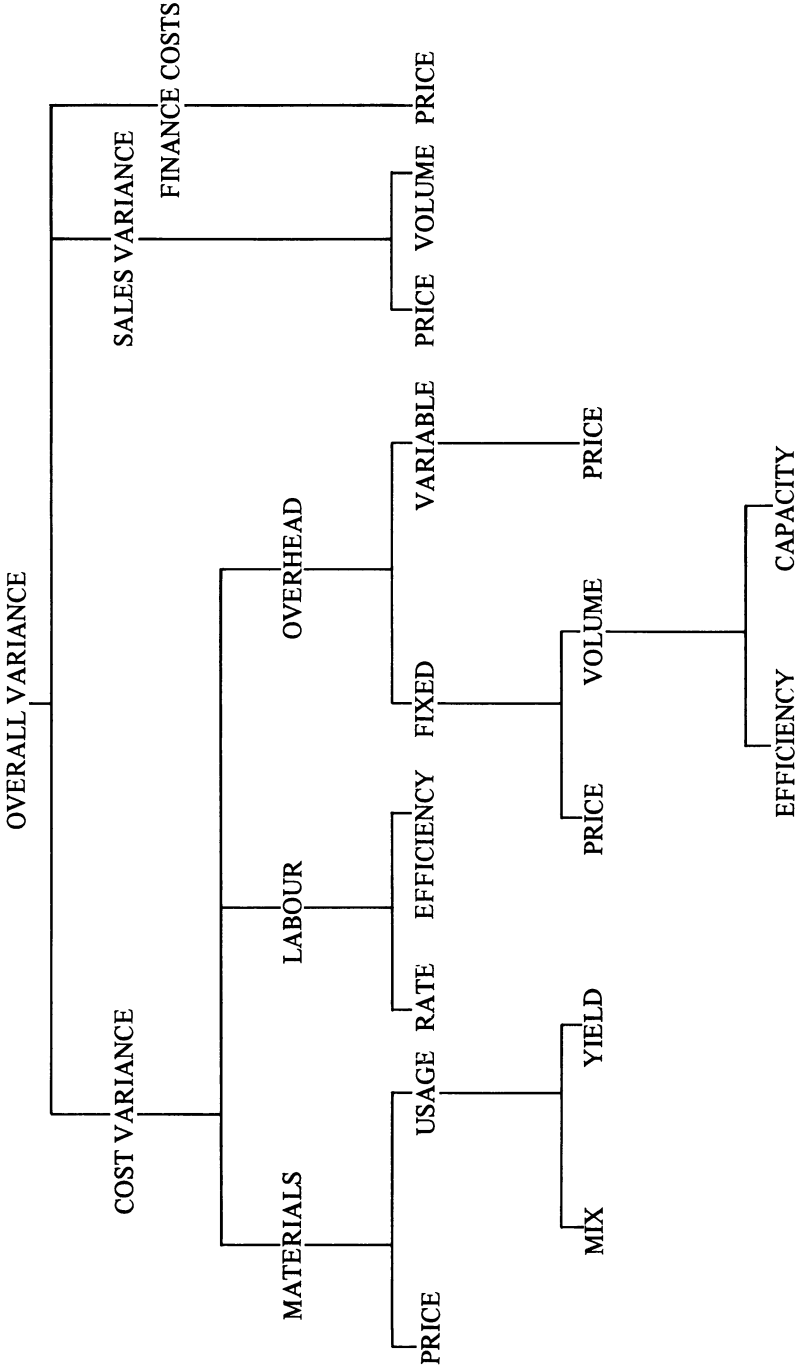


Figure A.7 Cost report

MONTHLY COST REPORT	THIS PERIOD		CUMULATIVE THIS YEAR		MAJOR COMMENTS	SCH. No.
	Actual	Budget	Actual	Budget		
SALES Products 1 2 3 4 5						
A TOTAL						
PRODUCTION Products 1 2 3 4 5						
B TOTAL						
MARGINS (A - B)						
OVERHEADS FACTORY 1 2 3						
ADMINISTRATION COSTS						
C TOTAL						
PROFIT (B - C)						
FINANCIAL: Dividend Interest						
RETAINED EARNINGS						

From: Cost Accountant
 To: Financial Director
 Production Director
 Factory
 Sales Directors

Figure A.8 Variance chart



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