Acknowledgments

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Contents

"Education is the best *provision* for old age."

Aristotle (384 BC - 322 BC)

Foreword

This book contains sample problems and essay-type questions in financial accounting and finance. After each problem or question you will find some hints how to tackle this problem and a solution. So, the book gives an idea how to approach a question, what logic should be used in answering it and how the answers should be organized and reported.

The book covers the most important areas of financial accounting such as preparing financial statements (a balance sheet, a profit and loss account and a cash flow statement), accounting for fixed and current assets, accounting in joint-stock companies, dividend policy, alternative methods of accounting, analysis of the financial statements and valuation of the company.

The first part of the book, 'Preparing financial statements', covers technical problems, while the second part – essay-type questions. Although there are some problems on bookkeeping, that is, recording of transactions, we put the emphasis on the analysis of different permitted methods of accounting and how the choice of any particular method will affect the financial statements and, hence, the investors' and creditors' view of the company. Therefore, the questions concerned do not require the detailed knowledge of any particular set of accounting standards, but the knowledge of general principles and methods of accounting. The solutions are drawn in accordance with the International Financial Reporting Standards, but most of the principles are very general and form the basis for the other accounting standards as well.

This book may be used as a supplement to a textbook in financial accounting. It may also be useful for a revision of the studied material and a preparation for the examinations. Although this book should not be considered as the main and single course book, the problems are chosen in such a way, that they cover all the most important topics and problem arrears of accounting. After reading the book the students should understand the general principles of financial accounting and should be able to analyze the financial statements.

The book may be used for an introductory course in financial accounting by undergraduate students, as well as MBA students. The book may also be interesting for practitioners who study the introductory units to obtain such professional qualifications as ACCA, CIMA, etc., and others interested in accounting and analysis of the financial statements.

Abbreviations

APPR – appropriation account

AVCO – average cost

BS – balance sheet

CA – current asset

CFS – cash flow statement

CGS / COS – cost of goods sold / cost of sales

CL – current liability

EPS – earnings per share

EX – expense

FA – fixed asset

FIFO – first in – first out

K – capital

LIFO – last in – first out

LTL – long-term liability

NBV – net book value

P&L – profit and loss account / income statement

P/E – price-earnings ratio

PAT – profit after tax

PBIT – profit before interest and tax

PBT – profit before tax

REV – revenue

ROCE – return on capital employed

ROE – return on equity

CPP – current purchasing power

CRC – current replacement cost

Part 1. Preparing Financial Statements

Chapter 1. Preparing a Balance Sheet and a Profit and Loss Account

! Hint

Students in financial accounting are always asked to draw a balance sheet and a profit and loss account from a trial balance with a list of adjustments. This question usually takes a lot of time, and the answers carry a lot of marks in the exam. Therefore, it is important to handle it properly. There are some general advices concerning the preparations of such statements:

- First, read the trial balance and all the adjustments. You may take notes on how each adjustment should be recorded and which accounts should be affected not to forget to adjust the corresponding account when you put it in a financial statement. Keep in mind that each adjustment should be a DOUBLE-ENTRY: the sum of the debit entry must be equal to the sum of the credit entry always.
- But writing a complete set of journal entries in your answer book is not necessary since it will not be marked. It is enough to show how you obtained a figure in brackets after the name of an account, as we do in the answers here. A quotation from LSE study guide confirms this:

  "Only brief workings are required for the profit and loss account and balance sheet and a complete set of 'T' accounts, or journal entries, is definitely a serious waste of time. By the time of the examination, students should be skilled enough to reduce some workings simply to notes on the face of the profit and loss account and balance sheet. The 8-column accounting paper would be very useful in answering this question."
- If you don't know how to make an adjustment, just skip it. Each adjustment is marked separately, so, you may only loose a couple of marks.
- Do not forget to write the headings for the financial statements:

  Name of the company. Profit and Loss Account for the year ended *date.*

  Name of the company. Balance Sheet as at *date.*
- The financial statements should be presented in the correct formats – like you may see in the answers below. In the balance sheet a student must put the headings for fixed assets, current assets, current liabilities, long-term liabilities, capital and reserves. A student should always name and calculate such sub-totals as net current assets (net working capital) and net assets (net worth). In the profit and loss account there should be headings for sales, cost of sales (cost of goods sold), other income and expenses. The following sub-totals should be calculated: gross profit, profit before interest and tax, profit before tax, profit after tax, retained profit.

- If your balance sheet does not balance, do not try to find a mistake since it may take a lot of time. Instead, use this time to answer another question. Marks are awarded for every correct figure, but not for the fact that your balance sheet has agreed. So, finding a mistake may bring you another mark but you may loose more marks for not answering another question because of lack of time. Therefore, in case your balance sheet does not agree, just state in your answer that the figure for net assets should be equal to the figure for capital and reserves due to the major accounting equation, and leave this until you answer the remaining questions and have some time to look for a mistake.

? Question 1

Mr. Smith runs a hardware store supplying items to the wholesale trade. His company's trial balance at September 30th 2004, before any final adjustments have been made is as follows:

	£
Sales	300,000
Sales returns	5,000
Carriage in	2,000
Wages	50,000
Premises	128,000
Equipment	40,000
Provision for depreciation (equipment)	8,000
Creditors	25,000
Rent & rates	5,000
Heating & lighting	4,000
Discount allowed	2,500
Discount received	1,500
Purchases	160,000
Purchases returns	5,000
Carriage out	2,000
Stock-1, October 2003	15,000
Debtors	30,000
Rental income	3,000
Administration expenses	8,000
Insurance	1,500
Cash	9,500
Bank loan	40,000
Capital	100,000
Drawings	20,000

The additional information is also available:

1. Stock was counted at the close of business, on September 30th, 2004, and valued at £25,000. This figure included £2,500 of some damaged goods which would normally be sold for £3,000. If will cost £800 to repair them in order to sell at a regular price.

2. A customer notified the company on September 25th that he was returning goods of the wrong specification for which he had been invoiced £5,300 (the cost plus 25% mark-up). The returned goods were received into the shop in good condition on October 1st, on which date the return was recorded in the accounting records.

3. In September some equipment was sold for £5,000 on credit. The sold equipment was bought on June 15th, 2002, for £10,000 and the installation costs incurred were £2,000. The sale has not been entered in the accounts yet. The company's policy is to provide for the full year depreciation in the year of purchase and no depreciation in the year of disposal.

4. Depreciation of equipment is to be provided at the rate of 20% per year using decreasing balance method.

5. Bad debts of £500 are to be written off and provision for doubtful debts is to be created for 5% of the remaining debtors.

6. The freehold premises have been professionally valued in September 2004 at £142,000 and this figure is to be used in the accounts.

7. £600 of rental income is still owing to Mr. Smith by his tenant.

8. On September 1st the company paid insurance of £600 for the following three months, till December 1st.

9. £1,000 of wages are outstanding, relating to overtime worked in September.

10, Mr. Smith, who is the owner of the business, repaid the whole amount (£40,000) of his business' bank loan by himself. No entry has been made to reflect that fact.

Required:

a) Prepare a profit and loss account and a balance sheet for Mr. Smith's company for the year ended September 30th, 2004. **(30 marks)**

b) Explain which accounting concepts affect the adjustments 1, 4, 5 and 8. **(5 marks)**

! Hint

In the first part of the question one is asked to prepare the final financial statements. Therefore, only the financial statements will be marked by the examiner[1]. Hence, if you are proficient enough, you can start preparing the final statements straightaway. We will do so answering the next questions of this chapter.

But to answer this question we will show all the steps carefully.

Step 1. Determine the nature of the accounts in the trial balance (asset: fixed or current; liability: current or long-term; capital; revenue; cost of goods sold; other expense) and whether this is a debit

[1] But you should provide all workings! You should show the examiner how you obtained all the figures.

or a credit entry[2]. Check that the trial balance is balanced indeed (the sum of all debit accounts equals to the sum of all credit accounts).

Trial Balance as at September 30th, 2004

	£	£	What?
Sales		300,000	P&L: REV
Sales returns	5,000		P&L: REV reduction
Carriage in	2,000		P&L: CGS
Wages	50,000		P&L: EX
Premises	128,000		BS: FA
Equipment	40,000		BS: FA
Provision for depreciation (equipment)		8,000	BS: FA reduction
Creditors		25,000	BS: CL
Rent & rates	5,000		P&L: EX
Heating & lighting	4,000		P&L: EX
Discount allowed	2,500		P&L: EX
Discount received		1,500	P&L: REV
Purchases	160,000		P&L: CGS
Purchases returns		5,000	P&L: CGS reduction
Carriage out	2,000		P&L: EX
Stock-1 October 2003	15,000		P&L: CGS
Debtors	30,000		BS: CA
Rental income		3,000	P&L: REV
Administration expenses	8,000		P&L: EX
Insurance	1,500		P&L: EX
Cash	9,500		BS: CA
Bank loan		40,000	BS: LTL
Capital		100,000	BS: K
Drawings	20,000		BS: K reduction
	482,500	482,500	

Step 2. Adjust the trial balance for the additional information.

First, we will journalise the adjustments:

1. The rule is that the stock is valued at the lower of costs and net realizable value. The cost of the damaged stock is £2,500, while its net realizable value, being the expected selling price less any costs which must be incurred prior to selling, is £3,000 – £800 = £2,200. Since the net realizable value is lower than the cost of these goods, we must revalue them at the net realizable value instead of the cost. Therefore, the value of the closing stock is £25,000 – £2,500 + £2,200 = £24,700. This figure is to be included into the trial balance:

Dr Stock £24,700 (BS: CA).

Cr Closing stock £24,700 (P&L: CGS).

[2] Assets are debit accounts while liabilities and capital are credit accounts. But there are some accounts which reduce the value of assets (e.g. provision for depreciation or doubtful debts). Such accounts are credit ones. Concerning profit and loss accounts, revenues are credit accounts (since they increase the value of the capital) while expenses are debit ones (since they reduce the value of the capital).

2. Since the customer has been invoiced for these goods, this transaction has already been recorded as a sale. But now it turns out that this is not a sale. Therefore, we need to subtract the selling price of these goods from sales and debtors:

Dr Sales returns[3] £5,300 (P&L: REV reduction).

Cr Debtors £5,300 (BS: CA).

But since these goods have not been sold they belong to Mr. Smith's company, and they must be included in the closing stock figure at cost. We are told that Mr. Smith sold the goods with 25% mark-up; and the mark-up is the gross profit as a percentage of cost of sales, by definition[4]. So, the cost of the sold goods is £5,300/1.25 = £4,240. Since the goods will be delivered to the warehouse only on October 1st, they are not included into the figure for stock in the first adjustment, which was obtained following a physical stock count on the 30th of September. Hence, we must add the cost of these goods to our stock figures:

Dr Sock £4,240 (BS: CA)

Cr Closing stock £4,240 (P&L: CGS).

3. Since this asset disposal has not been recorded in any way we must make all the 4 entries:

Dr Debtors £5,000 (BS: CA) (since the equipment was sold on credit terms).

Cr Equipment at cost £A (BS: FA).

Dr Provision for depreciation (equipment) £B (BS: FA reduction).

Dr Loss on disposal £C (P&L: EX).

The cost of the sold equipment is the acquisition cost plus the installation costs:

£A = £10,000 + £2,000 = £12,000.

The provision for depreciation of the sold equipment equals to the depreciation charge for the year ended September 30th, 2002, plus the depreciation charge for the year ended September 30th, 2003 (full year's depreciation in the year of purchase and no depreciation in the year of disposal):

£B = £12,000 x 0.2 + (£12,000 – £12,000 x 0.2) x 0.2 = £4,320.

The loss on disposal is the difference between the selling price and the net book value of the sold equipment:

£C = £5,000 – (£12,000 – £4,320) = £2,680.

Note that the sum of all debit entries must be equal to the sum of all credit entries:

£5,000 + £4,320 + £2,680 = £12,000.

4. The depreciation charge for the year ended September 30th, 2004, is calculated for the remaining equipment using the reducing balance method:

[3] Since there is a special account for sales returns in the trial balance, we debit it. If there was no such account, we could either create it or debit the sales account directly.

[4] For details see Chapter 4 Question 2.

[(£40,000 – £12,000) – (£8,000 – £4,320)] x 0.2 = £4,864.

Dr Depreciation expense (equipment) £4,864 (P&L: EX).

Cr Provision for depreciation (equipment) £4,864 (BS: FA reduction).

5. To write bad debts off:

Dr Bad debts written off £500 (P&L: EX).

Cr Debtors £500 (BS: CA).

Provision for doubtful debts should be equal to 0.05 x (£30,000 – £500 – £5,300 + £5,000) = £1,460. Since there is no provision for doubtful debts in the Trial Balance now, we need to create it (to adjust it for the whole amount):

Dr Increase in provision for doubtful debts £1,460 (P&L: EX).

Cr Provision for doubtful debts £1,460 (BS: CA reduction).

6. To revalue freehold premises by £142,000-£128,000=£14,000:

Dr Premises £14,000 (BS: FA).

Cr Revaluation reserve £14,000 (BS: K).

7. This is accrued company's income for this year, and it must be added to rental income. Since the tenant has not paid yet, it must also be added to accounts receivable:

Dr Rental income receivable £600 (BS: CA).

Cr Rental income £600 (P&L: REV).

8. Since this insurance payment covers three months, 2/3 of it is still prepaid and should not be included into the insurance expenses of this year:

Dr Prepaid insurance £400 (BS: CA).

Cr Insurance £400 (P&L: EX).

9. These overtime wages have been accrued and should be added to the wage expense for this year:

Dr Wages £1,000 (P&L: EX).

Cr Wages outstanding[5] £1,000 (BS: CL).

10. Since the owner repaid the company's loan from his own pocket, this is considered as an introduction of the additional capital into the business:

Dr Bank loan £40,000 (BS: LTL).

Cr Capital £40,000 (BS: K).

Secondly, we will use the worksheet to prepare the adjusted trial balance.

- Put the adjustments into the corresponding column
- Check the correctness of the double-entry book-keeping

[5] The synonyms for "outstanding" are "accrued", "payable", "owing", "due", "unpaid". It is possible to use any.

- Calculate the adjusted balances
- Check that the adjusted trial balance is balanced indeed
- Distinguish between balance-sheet and profit-and-loss accounts

Worksheet as at September 30th, 2004

	Unadjusted trial balance		Adjustments	
	£	£	£	£
Sales		300,000		
Sales returns	5,000		5,300	
Carriage in	2,000			
Wages	50,000		1,000	
Premises	128,000		14,000	
Equipment	40,000			12,000
Provision for depreciation (equipment)		8,000	4,320	4,864
Creditors		25,000		
Rent & rates	5,000			
Heating & lighting	4,000			
Discount allowed	2,500			
Discount received		1,500		
Purchases	160,000			
Purchases returns		5,000		
Carriage out	2,000			
Stock-1 October 2003	15,000			
Debtors	30,000		5,000	5,300 + 500
Rental income		3,000		600
Administration expenses	8,000			
Insurance	1,500			400
Cash	9,500			
Bank loan		40,000	40,000	
Capital		100,000		40,000
Drawings	20,000			
Stock			24,700 + 4,240	
Closing stock				24,700 + 4,240
Loss on disposal			2,680	
Depreciation expense (equipment)			4,864	
Bad debts written off			500	
Increase in prov. for doubtful debts			1,460	
Provision for doubtful debts				1,460
Revaluation reserve				14,000
Rental income receivable			600	
Prepaid insurance			400	
Wages outstanding				1,000
	482,500	482,500	109,064	109,064

Worksheet as at September 30th, 2004 (continued)

	Adjusted trial balance		P&L		BS	
	£	£	£	£	£	£
Sales		300,000		300,000		
Sales returns	10,300		10,300			
Carriage in	2,000		2,000			
Wages	51,000		51,000			
Premises	142,000				142,000	
Equipment	28,000				28,000	
Provision for depreciation		8,544				8,544
Creditors		25,000				25,000
Rent & rates	5,000		5,000			
Heating & lighting	4,000		4,000			
Discount allowed	2,500		2,500			
Discount received		1,500		1,500		
Purchases	160,000		160,000			
Purchases returns		5,000		5,000		
Carriage out	2,000		2,000			
Stock-1 October 2003	15,000		15,000			
Debtors	29,200				29,200	
Rental income		3,600		3,600		
Administration expenses	8,000		8,000			
Insurance	1,100		1,100			
Cash	9,500				9,500	
Bank loan						
Capital		140,000				140,000
Drawings	20,000				20,000	
Stock	28,940				28,940	
Closing stock		28,940		28,940		
Loss on disposal	2,68		2,680			
Depreciation expense (eq.)	4,864		4,864			
Bad debts written off	500		500			
Increase in prov. for d.d.	1,460		1,460			
Provision for d.d.		1,460				1,460
Revaluation reserve		14,000				14,000
Rental income receivable	600				600	
Prepaid insurance	400				400	
Wages outstanding		1,000				1,000
Retained profit			68,636			68,636
	529,044	529,044	339,040	339,040	258,640	258,640

Step 3. Prepare the final financial statements using the information in the last four columns of the worksheet. You should use the vertical format for the balance sheet and profit and loss account.

The financial statements, which you are supposed to prepare, and a marking scheme are presented below. The awarded marks are shown in on the right-hand side. Remember that only the financial statements are marked. Marks are not awarded if you only prepare the worksheet. Neither are they awarded solely for the adjusting journal entries.

☺ Answer and a marking scheme

1. Mr. Smith's Co. Profit and Loss Account for the year ended September 30th, 2004 1

	£	£	£	
Sales		300,000		
less: Sales returns (5,000 + 5,300)		(10,300)	289,700	**1**
Cost of goods sold				
Opening stock		15,000		
Purchases	160,000			
less: Purchases returns	(5,000)			**0.5**
less: Discounts received	(1,500)			**0.5**
add: Carriage in	2,000	155,500		**0.5**
less: Closing stock				
(25,000 – 2,500 + 2,200 + 5,300/1.25)		(28,940)		**1+1**
			141,560	
Gross profit			148,140[6]	**1**
add: **Other income**				
Rental income (3,000 + 600)			3,600	**1**
			151,740	
less: **Expenses**				
Wages (50,000 + 1,000)		51,000		**1**
Depreciation expenses (equipment)				
((40,000 – 12,000) – (8,000 – 4,320)) x 0.2		4,864		**2**
Loss on disposal (5,000 – (12,000 – 4,320))		2,680		**2**
Rent & rates		5,000		
Heating & lighting		4,000		
Discounts allowed		2,500		
Carriage out		2,000		
Bad debts written off		500		**1**
Increased provision for doubtful debts				
(30,000 – 500 – 5,300 + 5,000) x 0.05		1,460		**1**
Administration expenses		8,000		
Insurance (1,500 – 400)		1,100	(83,104)	**1**
Net profit for the year (retained profit)			**68,636**[7]	

Total: 15.5 marks

[6] Gross profit = Sales – Cost of goods sold = 289,700 – 141,560.

[7] Net profit = Gross profit + Other incomes – Expenses = £148,140 + £3,600 – £83,104.

Mr. Smith Co. Balance Sheet as at September 30th 2004 **1**

	£	£	£	
Fixed assets	**Cost**	**Dep'n**	**NBV**	
Premises (128,000 + 14,000)	142,000	-	142,000	**1**
Equipment	28,000*	8,544**	19,456	**1+1**
	170,000	8,544	161,456	
Current assets				
Stock (25,000 – 2,500 + 2,200 + 5,300/1.25)	28,940			**1**
Debtors (30,000 – 500 – 5,300 + 5,000)	29,200			**1+1+1**
less: Provision for doubtful debts	(1,460)			**0.5**
Prepaid insurance (600 x 2/3)	400			**1**
Rental income receivable	600			**1**
Cash	9,500	67,180		
Current liabilities				
Creditors	25,000			
Wages outstanding	1,000	26,000		**1**
Net current assets			41,180[8]	**1**
Long-term liabilities			-	
Net assets			**202,636**[9]	
Financed by:				
Capital (100,000 + 40,000)		140,000		
Revaluation reserve (142,000 – 128,000)		14,000		**1**
Retained profits		68,636		
less: Drawings		(20,000)	**202,636**	**1**

Workings:

* *£40,000 – £12,000 = £28,000.*

** *£8,000 – £4,320 + £4,864 = £8,544.*

Total: 14.5 marks

2. Concepts:

1. We adjust for the closing stock because of the matching concept: we want to match sales revenues with the corresponding cost of sales to calculate the gross profit correctly. We re-value stock at its net realizable value instead of the cost because of the prudence concept: since we expect losses on sale of this stock we want to recognize them in the financial statements as soon as we expect them. **1 mark**

4. We provide for depreciation because of the matching concept: since a fixed asset brings benefits to the company over its whole useful life we want to spread the acquisition cost of this asset over its

[8] Net current assets = Current assets – Current liabilities = £67,180 – £26,000.

[9] Net assets = Fixed assets + Net current assets – Long-term liabilities = £161,456 + £41,180 – 0.

useful life in order to match these benefits with the corresponding expense which is called "depreciation". We use the same method of depreciation (decreasing balance method here) during the whole life of an asset because of the consistency concept. **1.5 marks**

5. We adjust for bad debts and provide for doubtful debts because of the prudence concept: if we expect that some debts will not be returned we recognize it now as an expense, even if the repayment is not due yet. **1 mark**

8. We adjust for prepayments because of the accruals, matching and going concern concepts: since two thirds of the rent payment corresponds to the next accounting period, we subtract it from this period's expenses (not accrued yet) and write it as a current asset which will be expensed in the next period to be matched with the revenues of the next period which it will help to generate. But we can write it as a prepayment only if we expect the business to operate in the foreseeable future.

1.5 marks

Total: 5 marks

? Question 2

Alpha Plc is a distributor of car components for the motor industry. The company's trial balance sheet at March 30th 2005 before any final adjustments have been made is as follows:

	£	£
Freehold land at cost	200,000	
Buildings al cost	250,000	
Buildings: accumulated depreciation at April 1st 2004		12,500
Motor vehicles at cost	60,000	
Motor vehicles: accumulated depreciation at April 1st 2004		12,000
Stock of goods at cost at April 1st 2004	48,000	
Provision for doubtful debts at April 1st 2004		5,800
Sales		267,300
Purchases	45,000	
Cash in hand	8,100	
Bank overdraft		97,000
10% Debenture loan repayable 2015		300,000
Expenses	120,000	
Ordinary share capital: 50,000 in £1 ordinary shares		50,000
Retained profit at April 1st, 2004		1,500
Legal fees in arrears		10,000
Trade creditors		145,000
Trade debtors	170,000	
	901,100	901,100

You are given the following additional information:

1. Following a physical stock count at the close of business on March 31st, 2005, the stock was valued at £60,000 at cost. Included in this sum is £8,000 for damaged components that would

normally be sold for £13,000, but are only worth £7,000.

2. Depreciation is to be provided on fixed assets as follows:
   a. Freehold land: No depreciation is charged
   b. Buildings: 5% per annum using the straight-line method
   c. Motor vehicles: 20% per annum using the reducing balance method.
3. Interest on the debenture loan at 10% for the year, due on March 31st, 2005, was not paid until April 10th, 2005.
4. On March 20th, 2005, 25,000 £1 ordinary shares were issued to existing shareholders at £2.50 each. This share issue was undertaken to raise funds to reduce the company's bank overdraft and to reduce its overall level of gearing. All money raised by the share issue was immediately used to reduce the bank overdraft. No entries have yet been made in the accounting records in respect of these transactions.
5. In a further effort to reduce debt, on March 25th, 2005 Ashton sold freehold land costing £20,000 to the bank in exchange for a £30,000 reduction in the company's bank overdraft. This transaction has not yet been entered in the accounts.
6. Taxation on the year's profit is estimated at £15,250 and should be paid on October 31st, 2005.
7. The company has decided to write off irrecoverable debts of £6,500 and to increase the provision for doubtful debts to 5% of the remaining debtors.
8. On January 1st, 2005, the company paid £6,000 cash for the yearly road tax on its motor vehicles for the calendar year 2005. Due to an accounting error, this transaction had not been accounted for in the trial balance.
9. Provision is to be made for a dividend of 10 pence on all shares, payable on July 1st 2005.

Required:

Prepare a profit and loss account and a balance sheet for Alpha Plc as at March 31st 2005 in a form suitable for presentation to the directors.

! Hint

Since there is always a lack of time at an exam, you need to answer all the questions as fast as possible. Normally, there is no time to prepare the worksheet as it is time consuming. Therefore, now we will skip step 1 and begin the preparation of the worksheet. We will just journalise the adjustments and go directly to step 3 – the preparation of the financial statements.

Adjustments:

1. The value of the closing stock is £60,000 – £8,000 + £7,000 = £59,000 since we need to revalue the damaged components at the lowest expected selling price:

Dr Stock £59,000 (BS: CA).

Cr Closing stock £59,000 (P&L: CGS).

2. The depreciation charge on buildings is calculated as a percentage of cost (straight-line method) and equals 0.05 x £250,000 = £12,500:

Dr Depreciation expense (buildings) £12,500 (P&L: EX).

Cr Provision for depreciation (buildings) £12,500 (BS: FA reduction).

The depreciation charge on motor vehicles is calculated as a percentage of net book value (reducing-balance method) and equals 0.2 x (£60,000 – £12,000) = £9,600:

Dr Depreciation expense (motor vehicles) £9,600 (P&L: EX).

Cr Provision for depreciation (motor vehicles) £9,600 (BS: FA reduction).

3. We need to adjust for the accrued interest on the debenture loan which has not been paid yet but should be included in expenses of this accounting period. The interest expense for the whole year is 0.1 x £300,000 = £30,000:

Dr Interest expense £30,000 (P&L: EX).

Cr Interest accrued £30,000 (BS: CL).

4. The amount of money raised by the issue of ordinary shares is 25,000 x £2.5 = £62,500. The excess of funds raised over the par value of the issued share capital goes to the share premium account:

Dr Bank overdraft £62,500 (BS: CL).

Cr Ordinary share capital £25,000 (BS: K).

Cr Share premium £37,500 (BS: K).

5. The company sold the freehold land for £30,000, while its cost was £20,000 in the balance sheet. Therefore, there is profit on disposal of £10,000 (there is no provision for depreciation for freehold land):

Dr Bank overdraft £30,000 (BS: CL).

Cr Freehold land at cost £20,000 (BS: FA).

Cr Profit on disposal £10,000 (P&L: REV).

6. The taxation on this year's profit is to be included into this Profit and Loss Account even if it is unpaid:

Dr Taxation £15,250 (P&L: APPR).

Cr Taxation payable £15,250 (BS: CL).

7. To write bad debts off:

Dr Bad debts written off £6,500 (P&L: EX).

Cr Debtors £6,500 (BS: CA).

The final provision for doubtful debts should equal to (£170,000 – £6,500) x 0.05 = £8,175. Hence, it should be increased by £8,175 – £5,800 = £2,375:

Dr Increase in provision for doubtful debts £2,375 (P&L: EX).

Cr Provision for doubtful debts £2,375 (BS: CA reduction).

8. The company paid the road tax for the calendar year 2005. Since the financial year ends on March 31st, 2005, only one forth of this payment has been accrued and needs to be accounted for in the Profit and Loss Statement. The other three forth are still prepaid:

Cr Cash £6,000 (BS: CA).

Dr Road tax £1,500 (P&L: EX).

Dr Prepaid road tax £4,500 (BS: CA).

9. The total divided proposed equals £0.1 x (50,000 + 25,000) shares = £7,500 and will be paid in the next accounting period:

Dr Dividends £7,500 (P&L: APPR).

Cr Dividends proposed £7,500 (BS: CL).

☺ Answer

Alpha Plc. Profit and Loss Account for the year ended March 31st, 2005

	£	£
Sales		267,300
Cost of goods sold		
Opening stock	48,000	
Purchases	45,000	
less: Closing stock (60,000 – 8,000 + 7,000)	(59,000)	34,000
Gross profit		233,300
less: **Expenses**		
Depreciation expense (buildings) (0.05 x 250,000)	12,500	
Depreciation expense (motor vehicles) (0.2 x (£60,000 – £12,000))	9,600	
Profit on disposal (30,000 – 20,000)	(10,000)	
Bad debts	6,500	
Increase in provision for doubtful debts ((170,000 – 6,500) x 0.05 – 5,800)	2,375	
Road tax (6,000 x 1/4)	1,500	
Expenses	120,000	
		142,475
Profit before interest and tax		90,825
less: Interest expense (0.1 x 300,000)		(30,000)
Profit before tax		60,825
less: Taxation		(15,250)
Profit after tax		45,575
less: Dividends (0.1 x (50,000 + 25,000))		(7,500)
Retained profit for the year		**38,075**

Alpha Plc. Balance Sheet as at March 31st, 2005

	£	£	£
Fixed assets	**Cost**	**Dep'n**	**NBV**
Freehold land at cost (200,000 - 20,000)	180,000	–	180,000
Buildings	250,000	25,000*	225,000
Motor vehicles	60,000	21,600**	38,400
	490,000	46,600	443,400
Current assets			
Stock (60,000 – 8,000 + 7,000)	59,000		
Trade debtors (170,000 – 6,500)	163,500		
less: Provision for doubtful debts (163,500 x 0.05)	(8,175)		
Prepaid road tax (6,000 x 3/4)	4,500		
Cash (8,100 – 6,000)	2,100	220,925	
Current liabilities			
Bank overdraft (97,000 – 62,500 – 30,000)	4,500		
Trade creditors	145,000		
Interest accrued (300,000 x 0.1)	30,000		
Taxation payable	15,250		
Dividends proposed (75,000 x 0.1)	7,500		
Legal fees in arrears	10,000	212,250	
Net current assets			8,675
Long-term liabilities			
10% Debenture loan repayable 2015			(300,000)
Net assets			**152,075**
Financed by:			
Ordinary share capital:75,000 £1 ordinary shares		75,000	
Share premium		37,500	
Retained profits (1,500 + 38,075)		39,575	**152,075**

Workings:

* *12,500 + 12,500 = 25,000.*

** *12,000 + 9,600 = 21,600.*

? Question 3

Beta Ltd is a supplier of organic foods to health food shops. The bookkeeper has extracted the following trial balance from its accounting records as at March 31st, 1997:

	£	£
Fixtures and fittings: cost	90,000	
provision for depreciation @ 01.04.96		27,000
Motor vehicles: cost	63,000	
provision for depreciation @ 01.04.96		22,000
Stock of goods @ 01.04.96, at cost	76,350	
Trade debtors	93,600	
Provision for doubtful debts		5,100
Prepayments	5,000	
Cash at bank	52,540	
Trade creditors		47,100
10% Debenture loan, repayable 2009		40,000
Share capital		80,000
Retained profits brought forward		26,280
Sales		982,000
Purchases	653,000	
Wages and salaries	34,750	
Directors' remuneration	42,000	
Business rates	19,000	
Rent	22,000	
Electricity	12,000	
Sundry expenses	7,240	
Distribution costs	59,000	
	1,229,480	1,229,480

The following additional information was available:

1. In January 1997 the company sold a van for £600 cash. The originally cost of the van was £8,000, and on April 1st, 1996 its net book value was £1,600. The director who arranged the sale kept the cash as part of his annual bonus. No entries have yet been made in the business's accounts in respect of this transaction.
2. Depreciation is to be provided on fixed assets using the straight line method, to write the assets down to a nil residual value, at the following rates:
   a. Fixtures and fittings 10% on cost.
   b. Motor vehicles 20% on cost.
3. No depreciation is provided in the year of disposal of a fixed asset.
4. The stock was counted on March 31st, 1997 and was valued at cost, £73,000. This figure included some sacks of flour costing £1,800 that had been discovered to have been gnawed by mice. The directors had decided to destroy the flour immediately.
5. Examination of the company's debtors ledger by the auditors had revealed debts totalling

£3,200 which had been outstanding for more than twelve months. The auditors are advising that these debts be written off, and that the provision for doubtful debts be adjusted to 5% of the remaining trade debtors.

6. Provision is to be made for the audit fee, £3,500, and for the year's debenture interest which was due on March 31st, 1997 but was not paid until April 3rd, 1997 because of staff holidays.
7. The figure for prepayments in the trial balance represented three months rent paid in advance. With effect from January 1st, 1997 the company's rent increased to £24,000 a year, payable quarterly in advance.
8. Corporation Tax on the current year's profits is estimated to be £19,800.
9. The company's authorised share capital is £100,000, divided into 200,000 ordinary shares of 50p each. No interim dividend has been paid on the issued shares, but the directors propose to pay a final dividend of 20p per share in June 1997.

Required:

A profit and loss account for Beta Ltd for the year to March 31st, 1997 and a balance sheet as at that date in a form suitable for presentation to the directors.

! Hint

Adjustments:

1. Since no entry has been made in respect of this disposal of the van, we need to make all the four entries:

Dr Director remuneration £600 (P&L: EX) (instead of debiting cash account, since the cash has gone as a bonus directly).

Dr Loss on disposal £1,000 (P&L: EX) (the difference between the NBV and the amount of Cash received).

Cr Motor vehicles at cost £8,000 (BS: FA).

Dr Provision for depreciation £6,400 (BS: FA) (the difference between the cost and the NBV, since NBV = Cost – Accumulated depreciation).

We should always check that the sum of all debit entries should be equal the sum of all credit entries.

2. The depreciation for the year for fixtures and fittings equals 0.1 x £90,000 = £9,000:

Dr Depreciation expenses (fixtures and fittings) £9,000 (P&L: EX).

Cr Provision for depreciation (fixtures and fittings) £9,000 (BS: FA reduction).

The depreciation for the year for motor vehicles is calculated as a percentage of the cost of the remaining motor vehicles after the disposal, and equals 0.2 x £(63,000 – 8,000) = £11,000:

Dr Depreciation expenses (motor vehicles) £11,000 (P&L: EX).

Cr Provision for depreciation (motor vehicles) £11,000 (BS: FA reduction).

3. Since the spoiled sacks of flour have zero net realizable value, we need to subtract their cost from the cost of the closing stock, arriving at the figure for the closing stock £71,200:

Dr Stock £71,200 (BS: CA).

Cr Closing stock £71,200 (P&L: CGS).

4. To write bad debts off:

Dr Bad debts written off £3,200 (P&L: EX).

Cr Debtors £3,200 (BS: CA).

The final provision for doubtful debts should be equal to (£93,600 – £3,200) x 0.05 = £4,520. Hence, it should be decreased by £5,100 – £4,520 = £580:

Cr Decrease in provision for doubtful debts £580 (P&L: REV).

Dr Provision for doubtful debts £580 (BS: CA).

5. Since the audit fee and the debenture interest are due to be paid (accrued) on March 31st, we need to account for them as expenses in the P&L. But since they have not been paid because of the holidays, they are still the current liabilities of the company on this date.

Dr Audit fee £3,500 (P&L: EX).

Cr Provision for audit fee £3,500 (BS: CL).

Dr Interest expense £4,000 (P&L: EX).

Cr Interest accrued £4,000 (BS: CL).

6. From the figure for prepayments we know the old rental payment per quarter: £5,000. But the company's rent increased in January to £24,000/4 = £6,000 per quarter. Therefore, the rent expense for this financial year is 3 quarters x £5,000 + 1 quarter x £6,000 = £21,000.

Since the rent is payable quarterly in advance, the company has already paid for two quarters from January till June 2007. But the payment for the second quarter from April till June 2007 corresponds to the next accounting period. Hence, the prepayment should be equal to £6,000.

Dr Prepayments £1,000 (BS: CA).

Cr Rent £1,000 (P&L: EX).

7. Dr Corporation tax £19,800 (P&L: APPR).

Cr Corporation tax payable £19,800 (BS: CL).

8. The dividend is paid on all shares issued, not authorised. The company issued £80,000/£0.5 = 160,000 shares. Hence, the final dividend is 160,000 shares x £0.2 = £32,000 and will be paid in the next accounting period:

Dr Dividends £32,000 (P&L: APPR).

Cr Dividends proposed £32,000 (BS: CL).

☺ Answer

Beta Ltd Profit and Loss Account for the year ended March 31st, 1997

	£	£
Sales		982,000
Cost of goods sold:		
Opening stock	76,350	
Purchases	653,000	
less: Closing stock (73,000 – 1,800)	71,200	
		658,150
Gross profit		323,850
less: **Other expenses:**		
Wages and salaries	34,750	
Directors' remuneration (42,000 + 600)	42,600	
Business rates	19,000	
Rent (5,000 x 3 + 24,000/4)	21,000	
Electricity	12,000	
Sundry expenses	7,240	
Distribution costs	59,000	
Loss on disposal (1,600 – 600)	1,000	
Depreciation expenses:		
Fixtures & fittings (0.1 x 90,000)	9,000	
Motor vehicles (0.2 x (63,000 – 8,000))	11,000	
Bad debts written off	3,200	
Decrease in provision for doubtful debts ((93,600 – 3,200) x 0.05 – 5,100)	(580)	
Audit fee	3,500	
		222,710
Profit before interest and tax		101,140
less: Interest expense		(4,000)
Profit before tax		97,140
less: Corporation tax		(19,800)
Profit after tax		77,340
less: Dividends (0.2 x 80,000/0.5)		(32,000)
Retained profit for the year		**45,340**

Beta Ltd Balance Sheet as at March 31st, 1997

	£	£	£
Fixed assets	**Cost**	**Dep'n**	**NBV**
Fixtures and fittings	90,000	36,000*	54,000
Motor vehicles	55,000**	26,600***	28,400
	145,000	62,600	82,400
Current assets			
Stock (73,000 – 1,800)	71,200		
Trade debtors (93,600 – 3,200)	90,400		
less: Provision for doubtful debts (90,400 x 0.05)	(4,520)		
Prepayments (24,000/4 = 5,000 + 1,000)	6,000		
Cash	52,540	215,620	
Current liabilities			
Trade creditors	47,100		
Provision for audit fee	3,500		
Interest accrued (40,000 x 0.1)	4,000		
Corporation tax payable	19,800		
Dividends proposed (80,000/0.5 x 0.2)	32,000	106,400	
Net current assets			109,220
Long-term liabilities			
10% Debenture loan, repayable 2009			(40,000)
Net assets			**151,620**
Financed by:			
Share capital		80,000	
Retained profits (26,280 + 45,340)		71,620	
			151,620

Workings:
** 27,000 + 9,000 = 36,000;*
*** 63,000 – 8,000 = 55,000;*
**** 22,000 – 6,400 + 11,000 = 26,600.*

? Question 4

The Gamma Ltd has the following balances in its books at December 31st, 19x0:

	$	$
50c ordinary shares		20,000
6% preference shares of $1 each		14,000
Purchases	240,000	
Sales		310,000
Stock at January 1st, 19x0	20,000	
Director's fees	6,000	
Undistributed profit at January 1st, 19x0		35,700
10% Debentures (due 19x4)		20,000
Debenture interest paid	1,000	
Discounts allowed	500	
Administrative expenses	18,400	
Salesmen's salaries	18,500	
Selling and marketing expenses	4,000	
Heating and lighting	2,500	
Rent and rates	1,700	
Debtors	14,000	
Provision for doubtful debts at January 1st, 19x0		300
Creditors		9,700
Land and buildings at cost	65,000	
Vans at cost less depreciation	19,800	
Cash in hand	400	
Bank balance (overdraft)		2,100
	411,800	411,800

The following additional information is given:

1. The stock at December 31st, 19x0 has been valued at $32,000. Further investigation reveals that this stock includes some items originally purchased for $3,000 which have been in stock for a long time. They need modifications, probably costing about $600, after which it is hoped that they will be saleable for between $3,200 and $3,500. Other items, included in the total at their cost price of $5,000, have been sent to an agent and are still at his premises awaiting sale. It costs $200 for transportation and insurance to get them to the agent's premises, and this amount is included in the selling and marketing expenses.

2. The balance on the vans account ($19,800) is made up as follows:

	$
Vans at cost (as at January 1st, 19x0)	30,000
Less: Provision for depreciation to January 1st, 19x0	13,800
	16,200
Addition during the year	3,600
	19,800

The addition during the year was invoiced as follows:

	$
Recommended retail price	3,000
Signwriting on van	450
Underselling	62
Petrol	16
Number plates	12
License which expired December 31st, 19x0	60
	3,600

Depreciation is provided at 25% per annum on the reducing balance method.

3. The directors, having sought at the advice of an independent evaluator, wish to revalue the land and building at $80,000.

4. The directors wish to make a provision for doubtful debts of 2.5% of the balances of debtors at December 31st, 19x0.

5. Rent and rates prepaid at December 31st, 19x0 amounted to $400, and salesmen's salaries owing at that date were $443.

6. The directors have proposed an ordinary dividend of 5c per share, and the full preference dividend.

7. Ignore taxes.

8. Debenture interest is paid semi-annually.

Required:

a) Prepare a profit and loss account for Gamma Ltd the year ended December 31st, 19x0, and a balance sheet as at that date.

b) Explain your treatment of the debenture interest and the proposed dividends.

! Hint

Adjustments

1. First, we need to revalue the items, which have been in stock for a long time, at their net realizable value instead of their cost. The net realizable value is the lowest expected selling price less the cost of the modification: $3,200 – $600 = $2,600. Hence, we need to subtract the expected loss, which equals the difference between the cost and the net realizable value $3,000 – $2,600 = $400, from $32,000.

Secondly, we need to consider the other items costing $5,000. Since they are still at the agent’s premises, they should be included into the Cirrus Ltd closing stock figure (as the agent is not a customer). And the cost of transport and insurance should be accumulated to the cost of the closing

stock and not to the selling and marketing expenses. Therefore, the final figure for the closing stock is $32,000 – $400 + $200 = $31,800.

Dr Stock $31,800 (BS: CA).

Cr Closing stock $31,800 (P&L: CGS).

We also need to subtract $200 from selling and distribution expenses and add it to carriage in:

Dr Carriage in $200 (P&L: CGS).

Cr Selling and marketing expenses $200 (P&L: EX).

2. If we look at the addition to vans at cost, costing $3,600 in total, we may notice that the petrol and the licence should not have been capitalized to fixed assets since the petrol was going to be consumed within the year and the licence expired at the end of the year. Hence, the expenditure on the petrol and the licence should have been treated as revenue expenditure and subtracted as expenses in the profit and loss account for this year. Since these expenses are immaterial we may put them to selling and marketing expenses account:

Dr Selling and marketing expenses $76 (P&L: EX).

Cr Vans at cost $76 (BS: FA).

All other items like signwriting, undersealing and number plates have been capitalized correctly since their useful life is more than one year.

The depreciation expense for the year is calculated as 25% of the net book value and equals $(19,800 – 76) x 0.25 = $4,931.

Dr Depreciation expense $4,931 (P&L: EX).

Cr Provision for depreciation $4,931 (BS: FA reduction).

3. The land and buildings should be revalued by $80,000 – $65,000 = $15,000:

Dr Land and buildings at cost $15,000 (BS: FA).

Cr Revaluation reserve $15,000 (BS: K).

4. The provision for doubtful debts should be equal to 0.025 x $14,000 = $350:

Dr Increase in provision for doubtful debts $50 (P&L: EX).

Cr Provision for doubtful debts $50 (BS: CA reduction).

5. The prepaid rent and rates should be subtracted from the corresponding expense of this year and added to prepayments:

Dr Rent and rates prepaid $400 (BS: CA)

Cr Rent and rates $400 (P&L: EX).

Since the salesmen's salaries have been accrued, they should be added to expenses and current liabilities:

Dr Salesmen's salaries $443 (P&L: EX).

Cr Salesmen's salaries owing $443 (BS: CL).

6. The total amount of the ordinary dividends is \$0.05 x (\$20,000/\$0.5) shares = \$2,000:

Dr Ordinary dividends \$2,000 (P&L: APPR).

Cr Ordinary dividends proposed \$2,000 (BS: CL).

The total amount of the preference dividends is 6% x \$14,000 = \$840:

Dr Preference dividends \$840 (P&L: APPR).

Cr Preference dividends proposed \$840 (BS: CL).

8. The debenture interest for the whole year is 10% x \$20,000 = \$2,000. But \$1,000 was already paid in the middle of the year (look at the account "Debenture interest paid"). Therefore, we need to adjust for the other \$1,000:

Dr Debenture interest expense \$1,000 (P&L: EX).

Cr Interest payable \$1,000 (BS: CL).

☺ Answer

a) **Gamma Ltd. Profit and Loss Account for the year ended December 31st, 19x0**

	\$	\$
Sales		310,000
Cost of goods sold		
Opening stock	20,000	
Purchases	240,000	
add: Carriage in	200	
less: Closing stock (32,000 – 3,000 + (3,200 – 600) + 200)	(31,800)	228,400
Gross profit		81,600
less: **Expenses**		
Director's fees	6,000	
Discounts allowed	500	
Administrative expenses	18,400	
Salesmen's salaries (18,500 + 443)	18,943	
Selling and marketing expenses (4,000 – 200 + 60 + 16)	3,876	
Heating and lighting	2,500	
Rent and rates (1,700 – 400)	1,300	
Depreciation expense ((19,800 – 76) x 0.25)	4,931	
Increase in provision for doubtful debts	50	
		56,500
Profit before interest and tax		25,100
less: Debenture interest expense (0.1 x 20,000)		(2,000)
Profit before tax		23,100
less: Taxation		-
Profit after tax		23,100
less: Preference dividends (0.06 x 14,000)		(840)
Ordinary dividends (0.05 x (20,000/0.5))		(2,000)
Retained profit for the year		**20,260**

Gamma Ltd. Balance Sheet as at December 31st, 19x0

	$	$	$
Fixed assets	**Cost**	**Dep'n**	**NBV**
Land and buildings	80,000	-	80,000
Vans	33,524*	18,731**	14,793
	113,524	18,731	94,793
Current assets			
Stock (32,000 – 3,000 + (3,200 – 600) + 200)	31,800		
Trade debtors	14,000		
less: Provision for doubtful debts (14,000 x 0.025)	(350)		
Rent and rates prepaid	400		
Cash in hand	400	46,250	
Current liabilities			
Bank overdraft	2,100		
Creditors	9,700		
Interest payable (20,000 x 0.1 – 1,000)	1,000		
Salesmen's salaries owing	443		
Dividends proposed (2,000 + 840)	2,840	16,083	
Net current assets			30,167
Long-term liabilities			
10% Debentures (due 19x4)			(20,000)
Net assets			**104,960**
Financed by:			
50c ordinary shares		20,000	
6% preference shares of $1 each		14,000	
Revaluation reserve (80,000 – 65,000)		15,000	
Retained profits (35,700 + 20,260)		55,960	
			104,960

Workings:
** 30,000 + 3,600 – 16 – 60 = 33,524;*
*** 13,800 + 4,931 = 18,731.*

b) Debenture interest is considered to be an expense for the company since the company is obliged to pay it. Interest expense is tax deductible. On the contrary, the company is not obliged to pay dividends; therefore, dividends are appropriation of profit after tax and are not tax deductible. But once the company has proposed some dividends, they become the company's current liabilities, like the interest accrued.

? Question 5

The balances below have been extracted from the accounting records of Delta Limited at March 31st, 20X6:

	RUR'000	RUR'000
Revaluation reserve		55,000
Retained profits at 01.04.X5		26,200
Share capital: 200,000 ordinary shares of RUR 100 each		20,000
:10,000 8% cumulative RUR1,000 preference shares		10,000
Land and buildings: at valuation	140,000	
Land and buildings: accumulated depreciation		18,000
Share premium		22,000
6% Debenture loan: 20X9		80,000
Provision for doubtful debts		1,800
Plant & machinery: cost	320,000	
Plant & machinery: accumulated depreciation		210,000
Interim dividend paid on ordinary shares	4,000	
Interim dividend paid on preference shares	400	
Corporation tax	2,200	
Debenture interest	2,400	
Stock at 01.04.X5	35,000	
Trade debtors	65,000	
Bank account		14,100
Prepaid insurance at 01.04.X5	1,400	
Accrued electricity at 01.04.X5		6,000
Trade creditors		10,000
Fixed asset disposal proceeds		1,000
Suspense account		7,000
Sales		930,000
Purchases	396,000	
Wages and salaries	367,000	
Insurance	13,200	
Travel and entertainment	21,000	
Professional fees	14,500	
Electricity	29,000	
	1,411,100	**1,411,100**

You are given the following information:

1. Stocks at March 31st, 20X6 cost RUR 47,000,000. Included in this stock are items with a cost of RUR 1,400,000 which are damaged and are expected to be sold for RUR 200,000.

2. Prepaid insurance at March 31st, 20X6 is RUR 1,700,000 while accrued electricity, at that date, is RUR 5,500,000.

3. An item of plant and machinery, the cost of which was RUR 5,000,000 and whose net book value was RUR 2,300,000, was sold during the year for RUR 1,000,000. No accounting entries relating to

the disposal have been made in the company's books of account other than in relation to the disposal proceeds.

4. The land and buildings, at valuation, comprises: land RUR 80,000,000 and buildings RUR 60,000,000.

5. At March 31st, 20X6 the freehold land was valued at RUR 100,000,000. The directors wish the valuation of the land to be incorporated into the accounts.

6. Depreciation on fixed assets is to be charged as follows:

freehold land: no depreciation is charged

buildings: 1% per annum on a straight-line basis

plant & machinery: 30% per annum on a reducing balance basis

7. A bad debt of RUR 3,000,000 is to be written off. The provision for doubtful debts is to be revised to 4% of trade debtors.

8. On further investigation the following items were discovered in respect of the suspense account. A trade creditor amounting to RUR 9,000,000 had been omitted from the total figure in the trial balance. A payment for RUR 29,000,000 had been posted to the wages and salaries account as RUR 27,000,000.

9. A final dividend of RUR 0.03 per ordinary share is to be proposed by the directors.

10. The dividend on the cumulative preference shares, due to be paid on April 1st, 20X6 is to be provided.

11. Corporation tax of RUR 20,000,000 on the current year's profits is to be provided.

12. Interest on the debentures due to be paid on April 1st, 20X6 is to be provided.

Required:

Prepare a profit and loss account for Delta Limited for the year ended March 31st, 20X6 and a balance sheet at that date, in good style for the directors.

! Hint

Adjustments

1. We need to revalue the damaged stock at its realizable value instead of its cost. Hence, the value of the closing stock is RUR 47,000,000 – 1,400,000 + 200,000 = 45,800,000.

Dr Stock RUR 45,800,000 (BS: CA).

Cr Closing stock RUR 45,800,000 (P&L: CGS).

2. To adjust for the prepayment at 31.03.X6:

Dr Prepaid insurance at 31.03.X6 RUR 1,700,000 (BS: CA).

Cr Insurance RUR 1,700,000 (P&L: EX).

It should be noted that after this adjustment the insurance expense is decreased. But there was prepaid insurance at the beginning of this financial year of RUR 1,400,000 which has been expensed during this year and needs to be added to the insurance expense by the following entry:

Cr Prepaid insurance at 01.04.X5 RUR 1,400,000.

Dr Insurance RUR 1,400,000.

Therefore, the insurance expense in the P&L account is RUR 13,200,000 – 1,700,000 + 1,400,000 = 12,900,000 and the prepaid insurance at 31.03.X6 in the BS is RUR 1,700,000.

To adjust for the accrued electricity at 31.03.X6:

Dr Electricity RUR 5,500,000 (P&L: EX).

Cr Accrued electricity at 31.03.X6 RUR 5,500,000 (BS: CL).

But the amount of the accrued electricity at the beginning of the year should be subtracted from the electricity expense of this year since this payment covered the expense of the previous year:

Dr Accrued electricity at 01.04.X5 RUR 6,000,000.

Cr Electricity RUR 6,000,000.

Therefore, the electricity expense in the P&L account is RUR 29,000,000 + 5,500,000 – 6,000,000 = 28,500,000 and the accrued electricity at 31.03.X6 in the BS is RUR 5,500,000.

3. Since the disposal proceeds of RUR 1,000,000 have already been recorded on the disposal account, we need to make the remaining three entries:

Cr Plant and machinery: cost RUR 5,000,000 (BS: FA).

Dr Plant and machinery: accumulated depreciation RUR 2,700,000 (BS: FA) (the difference between the cost and the NBV, since NBV = Cost – Accumulated depreciation).

Dr Loss on disposal 1,300,000 (P&L: EX) (the difference between the NBV and the amount of cash received).

After these entries the disposal account will balance off and will not be shown in the financial statements.

4. This is just additional information for the next adjustments.

5. Since the current value of the freehold land (RUR 100,000,000) is higher than its value in the accounts (RUR 80,000,000) we need to revalue it:

Dr Land and buildings: at valuation RUR 20,000,000 (BS: FA).

Cr Revaluation reserve RUR 20,000,000 (BS: K).

6. The depreciation for the year for buildings under straight-line basis equals RUR 0.01 x 60,000,000 = 600,000:

Dr Depreciation expenses: buildings RUR 600,000 (P&L: EX).

Cr Land and buildings: accumulated depreciation RUR 600,000 (BS: FA reduction).

The depreciation for the year for plant and machinery under reducing balance basis is calculated as a percentage of the NBV of the remaining plant and machinery after the disposal and equals RUR 0.3 x (320,000,000 – 210,000,000 – 2,300,000) = 32,310,000:

Dr Depreciation expenses: plant and machinery RUR 32,310,000 (P&L: EX).

Cr Plant and machinery: accumulated depreciation RUR 32,310,000 (BS: FA reduction).

7. To write bad debts off:

Dr Bad debts written off RUR 3,000,000 (P&L: EX).

Cr Debtors RUR 3,000,000 (BS: CA).

The final provision for doubtful debts should be equal to RUR (65,000,000 – 3,000,000) x 0.04 = 2,480,000. Hence, it should be increased by RUR 2,480,000 – 1,800,000 = 680,000:

Dr Increase in provision for doubtful debts RUR 680,000 (P&L: REV).

Cr Provision for doubtful debts RUR 680,000 (BS: CA).

8. The suspense account is a temporary account which may arise because of some errors and omissions to balance the trial balance. Also if an accountant does not know how to record a transaction he or she may post this transaction temporarily to the suspense account. But before the financial statements are prepared, the balances on the suspense account must be corrected and this account will never go to the final statements.

First, the omitted trade creditor should be restored:

Cr Trade creditors RUR 9,000,000 (BS: CL).

Dr Suspense account RUR 9,000,000 .

Also wages and salaries should be increased by RUR 2,000,000:

Dr Wages and salaries RUR 2,000,000 (P&L: EX).

Cr Suspense account RUR 2,000,000.

As a result, the suspense account will balance off to zero.

9. The final dividends on ordinary shares amount to RUR 0.03 x 200,000,000 = 6,000,000:

Dr Final dividend on ordinary shares RUR 6,000,000 (P&L: APPR).

Cr Dividend on ordinary shares proposed RUR 6,000,000 (BS: CL).

10. The total amount of the preference dividends for the year is RUR 0.08 x 10,000,000 = 800,000. But it should be noted that the interim dividend paid on preference shares amounted to RUR 400,000. Hence, we should create provision for only those dividends which are still due to be paid, that is, for the remaining RUR 400,000:

Dr Final dividend on preference shares RUR 400,000 (P&L: APPR).

Cr Dividend on preference shares payable RUR 400,000 (BS: CL).

11. Dr Corporation tax RUR 20,000,000 (P&L: APPR).

Cr Provision for corporation tax RUR 20,000,000 (BS: CL).

12. As with the preference dividends, we need to provide for only that amount of interest which is still unpaid. The total debenture interest expense for the year is RUR 0.06*80,000,000=4,800,000. But there is already some debenture interest in the trial balance which has been paid. Hence, we need to provide for the remaining one half:

Dr Debenture interest RUR 2,400,000 (P&L: EX).

Cr Provision for debenture interest RUR 2,400,000 (BS: CL).

☺ Answer

a) **Delta Limited Profit and Loss Account for the year ended March 31st, 20X6**

	RUR'000	RUR'000
Sales		930,000
Cost of goods sold		
Opening stock	35,000	
Purchases	396,000	
less: Closing stock (47,000 – 1,400 + 200)	(45,800)	385,200
Gross profit		544,800
less: **Expenses**		
Wages and salaries (367,000 + 2,000)	369,000	
Insurance (13,200 – 1,700 + 1,400)	12,900	
Travel and entertainment	21,000	
Professional fees	14,500	
Electricity (29,000 – 6,000 + 5,500)	28,500	
Loss on disposal (2,300 – 1,000)	1,300	
Depreciation expense:		
- buildings (60,000 x 0.01)	600	
- plant and machinery ((320,000 – 210,000 – 2,300) x 0.3)	32,310*	
Bad debts	3,000	
Increase in provision for doubtful debts ((65,000 – 3,000) x 0.04 – 1,800)	680	
		483,790
Profit before interest and tax		61,010
less: Debenture interest expense (0.06 x 80,000)		(4,800)
Profit before tax		56,210
less: Corporation tax (2,200 + 20,000)		(22,200)
Profit after tax		34,010
add: Retained profit at 1.4.X5		26,200
Total profit available		60,210
Appropriated as follows:		
Interim dividend on preference shares	400	
Interim dividend on ordinary shares	4,000	
Final dividend on preference shares (10,000 x 0.08 – £400)	400	
Final dividend on ordinary shares (0.03 x 200,000)	6,000	(10,800)
Retained profit at 31.03.X6		**49,410**

**Assumption: no depreciation is provided for in the year of disposal.*

Delta Limited Balance Sheet as at March 31st, 20X6

	RUR'000	RUR'000	RUR'000
Fixed assets	**Cost**	**Dep'n**	**NBV**
Land and buildings	160,000*	18,600**	141,400
Plant and machinery	315,000***	239,610****	75,390
	455,000	258,210	216,790
Current assets			
Stock (47,000 – 1,400 + 200)	45,800		
Trade debtors (65,000 – 3,000)	62,000		
less: Provision for doubtful debts (62,000 x 0.04)	(2,480)		
Prepaid insurance	1,700	107,020	
Current liabilities			
Bank account	14,100		
Trade creditors (10,000 + 9,000)	19,000		
Accrued electricity	5,500		
Dividend on ordinary shares proposed (0.03 x 200,000)	6,000		
Dividend on preference shares payable (0.08 x 10,000 – 400)	400		
Provision for corporation tax	20,000		
Provision for debenture interest (0.06 x 80,000 – 2,400)	2,400	67,400	
Net current assets			39,620
Long-term liabilities			
6% Debenture loan: 20X9			(80,000)
Net assets			**176,410**
Financed by:			
Share capital:			
200,000 ordinary shares of RUR100 each		20,000	
10,000 8% cumulative RUR 1,000 preference shares		10,000	
Share premium		22,000	
Revaluation reserve (55,000 + 20,000)		75,000	
Retained profits at 31.03.X6		49,410	**176,410**

Workings:

* *140,000 + 20,000 = 160,000;*

** *18,000 + 600 = 18,600;*

*** *320,000 – 5,000 = 315,000;*

**** *210,000 – 2,700 + 32,310 = 239,610.*

Chapter 2. Preparing a Cash Flow Statement

! Hint

There are two main formats of a CFS: the American and the European. According to the American format, there are only three sections in a CFS: cash flow from operating activities, cash flow from investment activities and cash flow from financing activities. But in this book we will prepare CFS using the European format, which consists of eight sections and is, therefore, more detailed. The pro forma of such CFS is presented below.

Cash Flow Statement for the year ended XX.XX.XXXX

	£'000	£'000
1. Net cash flow from operating activities (Note 1)		XX
2. Returns on investment and servicing of finance		
Interest / dividends received (investment income)	X	
Interest paid	(X)	
Dividends on preference shares paid	(X)	XX
3. Taxation paid		(XX)
4. Capital expenditure and financial investments		
Receipts from sale of fixed assets / long-term investments	X	
Payments to acquire fixed assets / long-term investments	(X)	XX
5. Acquisitions and disposals of subsidiaries		
Receipts from disposal of subsidiaries	X	
Payments to acquire subsidiaries	(X)	XX
6. Equity dividends paid (ordinary shares)		(XX)
7. Management of liquid assets		
Receipts from sale of short-term investments	X	
Payments to acquire short-term investments	(X)	XX
Net cash flow before financing		XX
8. Financing		
Increase in long-term liabilities	X	
Repayment of long-term liabilities	(X)	
Proceeds from issue of shares (par + premium)	X	
Repurchase of shares	(X)	
Cash introduced into capital	X	
Drawings	(X)	XX
Net cash flow for the year		XX
Cash balance at the end of the year	XX	
Less: Cash balance at the beginning of the year	(XX)	
Net change in cash		XX

There are two methods of preparing a CFS: direct and indirect. Here we will use the indirect method, which is required at the exam and involves reconciliation of accrual-based revenues and expenses into cash flows. It is always possible to prepare a CFS using the indirect method from the P&L account for the year and two BSs at the beginning and at the end of the corresponding year.

But to prepare a cash flow statement is more an art than a science. You need to know the format of the CFS by heart. You need to know what transactions are reported under each section and how such transactions are reported in the BS and P&L account according to the accruals concept. Then you need to determine whether a transaction had really taken place and what was the amount of the corresponding cash flow.

- The net cash flow from operating activities is found via reconciliation of the operating profit in a separate note to the CFS:

Note 1. Reconciliation of operating profit to net cash flow from operating activities

	£'000
1. Operating profit (PBIT)	X
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation / amortisation for the year	X
Add/less: Increase / decrease in provision for bad and doubtful debts	X
Add/less: Loss / profit on disposal	X
3. Current assets adjustments:	
Add/less: Decrease / increase in stock, debtors, prepayments	X
4. Current liabilities adjustments:	
Add/less: Increase / decrease in creditors, accrued expenses[10]	X
Net cash flow from operating activities	XX

Preparing this note is the first step in preparation of a CFS.

- After the CFS is drawn up it is required to check that the net cash flow for the year equals to the net change in cash balances during the year. You should look at changes in the following accounts: cash in hand, cash at bank, bank overdraft.

? Question 1

The directors of Epsilon Plc are concerned about the substantial increase in the company's bank overdraft in 1999. The summarised balance sheets of the company at December 31st:

	1998		1999	
	£'000	£'000	£'000	£'000
Fixed assets (net of depreciation)		1,280		2,065
Current assets				
Stock at cost	300		650	
Trade debtors	375		595	
	675		1,245	
Current liabilities				
Bank overdraft	70		450	
Trade creditors	350		200	
Taxation	180		250	
	600		900	
Net current assets		75		345

[10] Taxation, interest and dividends payable are NOT accrued OPERATING expenses.

		1,355		2,410
Less: creditors falling due after more than one year		280		465
		1,075		1,945
Share capital and reserves				
Issued share capital	500		600	
Share premium account	300		360	
Land revaluation reserve	-		550	
Profit and loss account	275		435	
		1,075		1,945

The summarised profit and loss account for Epsilon Plc for the year ended December 31st, 1999:

	£000	£000
Sales		3,700
Cost of sales		2,500
Gross profit		1,200
Administration expenses	450	
Depreciation	120	
Interest payable	50	620
Net profit before taxation		580
Taxation		140
Net profit after taxation		440
Dividends		280
Retained profit for the year		160

No fixed assets were disposed of during the year ended December 31st, 1999.

Required:

a) Calculate the net cash flow from operating activities for 1999.

b) Prepare a cash flow statement in good style for 1999.

c) Reply to the following queries put to you by one of the directors of Epsilon Plc:

"Can you please explain to me how we have a healthy profit yet our bank overdraft has reached a record level? Surely there must be something wrong with the profit calculations, isn't there?"

☺ Answer

a) **Note 1. Reconciliation of operating profit to net cash flow from operating activities**

	£'000
1. Operating profit (580 + 50)[1]	630
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation	120
3. Current assets adjustments:	
Increase in stock (650 – 300)	(350)
Increase in debtors (595 – 375)	(220)
4. Current liabilities adjustments:	
Decrease in creditors (200 – 350)	(150)
Net cash flow from operating activities	30

b) **Epsilon Plc. Cash Flow Statement for the year ended December 31st, 1999:**

	£'000	£'000
1. Net cash flow from operating activities (Note 1)		30
2. Returns on investment and servicing of finance		
Interest paid		(50)
3. Taxation paid $(180 + 140 - 250)^2$		(70)
4. Capital expenditure and financial investments		
Payments to acquire fixed assets $(2{,}065 - 1{,}280 + 120 - 550)^3$		(355)
5. Acquisitions and disposals of subsidiaries		–
6. Equity dividends paid (ordinary shares)		(280)
7. Management of liquid assets		–
Net cash flow before financing		(725)
8. Financing		
Increase in long-term liabilities (465 – 280)	185	
Proceeds from issue of shares ((600 – 500) + (360 – 300))	160	345
Net cash outflow for the year		(380)
Bank overdraft at the end of the year	(450)	
Less: Bank overdraft at the beginning of the year	70	
Net decrease in cash		(380)

[1, 2, 3] – see hints below.

c) There is nothing wrong with the profit calculations. Profit is calculated on accrual basis when revenues and expenses are recognised irrespectively of whether the cash has been received or paid. Therefore, if, for example, a company sold some stocks on credit terms during the given period, it will recognise this sale as revenue of this period, although the cash will be received later. Hence, the company may have high profit but no underlying cash flow. In this example the company's operating profit is £630,000 while its net operating cash flow is only £30,000. We can see from the first note that this difference is mainly because the company purchased more stocks, sold more goods on credit and repaid to its creditors. All these created significant cash outflows but was not taken into account while calculating the profit figure because of the accruals and matching concepts applied.

You should keep in mind that the profit figure will always be different from the cash flow figure because of non-cash revenues and expenses, such as depreciation, profit or loss on disposal, bad debs written off and changes in provision for doubtful debts.

Moreover, there are some transactions which lead to significant cash flows but are never recorded in the profit and loss account. The examples of such transaction are acquisitions of fixed assets, issue or repayment of long-term liabilities, issue of shares or drawings. For example, this company purchased some fixed assets for £355,000 that led to a significant cash outflow. But we can see from the CFS that the company could have an even greater cash outflow of £725,000 if it did not take some long-term liabilities and issued more shares. Probably, the company attracted these funds to finance the acquisition of the fixed assets. Then the main reason why the net profit figure is much

higher than the net cash flow for the year is the investments of the company into its net working capital (net current assets).

! Hint

[1] Operating profit is profit *before* interest and tax. In the profit and loss account we are given the figure for net profit before taxation. Therefore, we need to add interest expense back to arrive at the figure for net profit before interest and taxation.

[2] The company had taxation payable at the beginning of the year of 180. Taxation for the year amounted to 140. So, the company needed to pay 180 + 140 = 320 for taxation in total. But 250 are still unpaid. Hence, the company has paid the remaining amount of 320 – 250 = 70.

[3] Initially the NBV of the company's fixed assets was 1,280. During the year the company bought some fixed assets for X. Then it revalued its land, which is included into the aggregate figure, by 550, and, hence, the revaluation reserve was created. Finally, it depreciated the fixed assets by 120 what led to a reduction in the NBV. So, from the following equation we can find the value of the purchased assets: 1,280 + X + 550 – 120 = 2,065.

? Question 2

The directors of Zeta Plc, a design company, give you their draft accounts for the two years ended September 30th, 1998 and September 30th, 1999.

Profit and Loss Accounts

	1999 £'000	1998 £'000
Turnover	7,800	6,500
Cost of sales	6,318	5,200
Gross Profit	1,482	1,300
Less: Trading Expenses	936	715
Financing and other charges	468	390
	1,404	1,105
Net profit before taxation	78	195
Less: Taxation	22	14
Net profit after taxation	56	181
Less: Dividends paid and proposed	20	50
Retained profit for the year	36	131
Retained profit brought forward	156	25
Retained profit carried forward	192	156

Balance Sheets

	1999		1998	
	£'000	£'000	£'000	£'000
Fixed Assets				
Net book value		281		260
Current Assets				
Stock	380		220	
Debtors	1,138		714	
Cash at bank	-		21	
	1,518		955	
Creditors: amounts falling due within one year				
Trade creditors	713		472	
Taxation payable	26		17	
Proposed dividends	-		40	
Bank overdraft	198		-	
	937		529	
Net current assets		581		426
Total assets less current liabilities		862		686
Creditors: amounts falling due after more than one year				
10% convertible debenture stock		80		100
		782		586
Capital and reserves				
Ordinary shares of £1 each	400		300	
15% preference shares of £l each	60		50	
Share premium	50		-	
Capital reserve	80		80	
Profit and loss account	192		156	
		782		586

Notes:

1) 10,000 preference shares were issued during the year at a premium of £1 per share in order to redeem £20,000 of convertible debenture stock.

2) Fixed assets are depreciated al the rate of 10% of net book value. No depreciation is charged in the year of acquisition of an asset and a full year's depreciation is charged in the year of disposal. During the year there were no disposals.

3) The interest paid on the convertible debenture stock and bank overdraft is included within 'financing and other charges'. The relevant figures are:

1998 £15,000.

1999 £28,000.

Required:

Draw up a cash flow statement with notes for Zeta Plc for the year ending September 30th, 1999.

☺ Answer

Note 1. Reconciliation of operating profit to net cash flow from operating activities

	£'000
1. Operating profit (78 + 28)[1]	106
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation (10% x 260)[2]	26
3. Current assets adjustments:	
Increase in stock (380 – 220)	(160)
Increase in debtors (1,138 – 714)	(424)
4. Current liabilities adjustments:	
Increase in creditors (713 – 472)	(241)
Net cash flow from operating activities	(211)

Zeta Plc. Cash Flow Statement for the year ended September 30th, 1999

	£'000	£'000
1. Net cash flow from operating activities (Note 1)		(211)
2. Returns on investment and servicing of finance		
Interest paid	(28)	
Preference dividend paid (60 – 0.15)[3]	(9)	(37)
3. Taxation paid (17 + 22 – 26)		(13)
4. Capital expenditure and financial investments		
Payments to acquire fixed assets (281 – 260 + 26)[4]		(47)
5. Acquisitions and disposals of subsidiaries		-
6. Equity dividends paid (20 – 9 + 40)[5]		(51)
7. Management of liquid assets		-
Net cash flow before financing		(359)
8. Financing		
Repayment of debenture stock (80 – 100)	(20)	
Proceeds from issue of preference shares:		
at par (60 – 50)	10	
at premium (1 x 10,000 shares)[6]	10	
Proceeds from issue of ordinary shares:		
at par (400 – 300)	100	
at premium (50 – 10)[7]	40	140
Net cash outflow for the year		(219)
Bank overdraft at the end of the year	(198)	
Less: Cash at bank at the beginning of the year	(21)	
Net decrease in cash		(219)

! Hint

[1] Operating profit is net profit before taxation plus interest expense, which is included into 'financing and other charges' and disclosed in Note 3.

[2] Depreciation expense is not given directly in the profit and loss account, but it is included into 'trading expenses'. We use the information in note 2 to calculate it. Since no depreciation is charged in the year of acquisition and there were no disposals, we only need to depreciate the assets which

the company had at the end of the previous year. Hence, we multiply the net book value of fixed assets as at September 30th, 1998 by 10%.

[3] Preference dividends are also not given directly, but they are included into 'dividends paid and proposed'. We know this because the company has some preference shares in its capital. Normally, dividends are paid on all shares issued by a particular date. We assume that the company paid 15% dividends on all 60,000 preference shares of £1 par value each.

[4] Since there were no disposals and no revaluation of fixed assets, the NBV at the end of the year should equal to the NBV at the beginning of the year plus the cost of acquired fixed assets less depreciation expense for the year.

[5] Since there is no liability for proposed dividends at the end of the year, the company paid not only the whole amount of dividends for this year, but also the proposed dividends for the previous year of £40,000. We assume that these proposed dividends were all ordinary. So, the dividends paid on ordinary shares equal dividends paid and proposed of £20,000 less dividends on preference shares of £9,000 plus the liability for the previous year of £40,000.

[6] From note 1 we know that the proceeds from issue of preference shares amounted to £20,000, of which one half was the par value and the other half was the premium.

[7] Since the share premium account increased by £50,000 during the year and we know that the premium on preference shares was £10,000, the premium on ordinary shares issued during the year was £40,000.

? Question 3

The balance sheets of Eta Limited as at December 31st, 2004 and 2005 and a summary of the profit and loss account for the year ended December 31st, 2005 are given below.

Balance Sheets as at December 31st

	2004 $	2005 $
Fixed Assets		
Land and buildings	37,000	42,000
Plant and machinery	16,500	18,500
Investment at cost	6,000	6,000
	59,500	66,500
Current Assets		
Stocks	11,412	12,631
Debtors	12,784	10,987
Cash at bank	4,713	0
	28,909	23,618
Current Liabilities		
Bank overdraft	0	1,490
Trade creditors	9,812	10,713
Corporation tax	4,000	3,000

Proposed dividends	2,000	2,500
	15,812	17,703
10% Debentures	13,000	2,800
Net assets	59,597	69,615
Capital and Reserves		
$1 ordinary shares	30,000	40,000
Revaluation reserve	3,000	8,000
Profit and loss account	26,597	21,615
	59,597	69,615

Summary Profit and Loss Account for the Year Ended December 31st, 2005

	$
Profit before tax (after depreciation on plant and machinery of $2,400)	10,518
Tax	2,000
Profit after tax	8,518
Dividends	3,500
Retained profit for the year	5,018

Notes

1) There were no additions to land and buildings during the year.

2) During the year certain items of machinery were disposed of for $2,200. The machines had originally cost $4,000 and had a net book value at the disposal date of $2,000.

3) During the year, a bonus issue of 1 for 3 was made on the ordinary shares, utilising available profits.

4) Included in the profit before tax is investment income of $1,250 and interest paid of $5,100.

Required:

a) Prepare a cash flow statement, together with the reconciliation statements of operating profit and cash balance, for Eta Limited for the year ended December 31st, 2005.

b) Discuss the advantages and disadvantages of the cash flow statement.

☺ Answer

a) **Note 1. Reconciliation of operating profit to net cash flow from operating activities**

	$
1. Operating profit (10,518 – 1,250 + 5,100)[1]	14,368
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation	2,400
Less: Profit on disposal (2,200 – 2,000)	(200)
3. Current assets adjustments:	
Less: Increase in stock (12,631 – 11,412)	(1,219)
Add: Decrease in debtors (10,987 – 12,784)	1,797
4. Current liabilities adjustments:	
Add: Increase in creditors (10,713 – 9,812)	901
Net cash flow from operating activities	18,047

Eta Limited. Cash Flow Statement for the year ended December 31st, 2005

	$	$
1. Net cash flow from operating activities (Note 1)		18,047
2. Returns on investment and servicing of finance		
Investment income	1,250	
Interest paid	(5,100)	(3,850)
3. Taxation paid (4,000 + 2,000 – 3,000)		(3,000)
4. Capital expenditure and financial investments		
Receipts from sale of fixed assets	2,200	
Payments to acquire fixed assets (18,500 – 16,500 + 2,000 + 2,400)[2]	(6,400)	(4,200)
5. Acquisitions and disposals of subsidiaries		-
6. Equity dividends paid (2,000 + 3,500 – 2,500)[3]		(3,000)
7. Management of liquid assets		-
Net cash flow before financing		3,997
8. Financing		
Repayment of debentures (2,800 – 13,000)	(10,200)	
Proceeds from issue of shares[4]	-	(10,200)
Net cash outflow for the year		(6,203)
Bank overdraft at the end of the year	(1,490)	
Less: Cash balance at the beginning of the year	(4,713)	
Net decrease in cash		(6,203)

b) The CFS is one of the three main financial statements which a company is obliged to prepare. As opposed to the BS and the P&L account, which are prepared on the accruals basis, the CFS is prepared on the cash basis, i.e. a transaction is recorded in the CFS when the cash is received or paid and not when the property right is transferred. Therefore, the CFS provides us with the additional and very important information on the sources and uses of a company's most liquid asset – cash. From the CFS we can see which activities of the company generate cash and where the cash is spent. Thus, the CFS is very useful for analysis of a company's liquidity position. For example, the CFS may uncover why the company has a significant profit but a net cash outflow at the same time.

Also the CFS may be very useful in determining the future prospects of the company. For example, if we see in the CFS that the company spent significant amount of money on acquisition of fixed assets and/or subsidiaries, we may think that the company is expanding and we will expect higher future benefits from it. But if we see that the company issued a lot of interest-bearing debentures, it may send a bad signal to the shareholders that there is a higher risk of future dividend payments.

Another advantage of the CFS is its objectivity. It is based solely on facts, and all cash flows are supported by bank statements and the cash book. It is not subject to accounting policies of the company. Hence, "window dressing" is impossible and CFSs of different companies are easily comparable.

The main disadvantage of the CFS comes from its main advantage: the cash basis. Since expenses are not matched against revenues in the CFS, it is impossible to determine the profitability of the company. We cannot analyse the net cash flows in order to understand the profitability because of the time lags between sales and cash received and expenses and cash paid. Thus, if a company is expanding, it may have negative cash flows for a long period of time, but it does not mean that the company is unprofitable.

Since the CFS is so different from the BS and the P&L account and is a compliment to them, these three statements should always be analysed together in order to understand the financial performance of a company. All together, they give the full picture of the company's activities, from which we can determine its future prospects, and make some predictions and recommendations.

! Hint

[1] Operating profit is the profit from the operating activities. Investment income and interest expense, disclosed in Note 4, do not arise from operating activities. Therefore, investment income should be subtracted and interest paid should be added back to profit before tax.

[2] The increase in the figure for land and buildings was not due to an acquisition, but rather due to a revaluation by $5,000. But the company did acquire some plant and machinery. Initially the NBV of plant and machinery was $16,500. During the year the company sold some machinery with the NBV of $2,000, which is disclosed in Note 2. It also bought some new machinery for $X and depreciated the remaining plant and machinery by $2,400 before it arrived at the figure for NBV at the end of the year of $18,500. Hence, the cost of the acquired machinery is found from the following equation: 16,500 – 2,000 + X – 2,400 = 18,500.

[3] The company should have paid the proposed dividends at the beginning of the year of $2,000 plus dividends for the year of $3,500. But $2,500 is still unpaid at the end of the year. Hence, the company has paid the difference.

[4] The par value of share capital increased by $10,000 during the year. But this increase was not due to issue of shares for cash. We know from Note 3 that the company made 1 for 3 bonus issue. This means than it issued exactly 10,000 $1 shares and financed this bonus issue by retained profits. So, the company just made the following bookkeeping entry without raising any cash:

Cr $1 ordinary shares $10,000

Dr Profit and loss account $10,000.

? Question 4

The following summarized balance sheets relate to Iota Ltd.

Balance Sheets as at June 30th

	20X0	20X1
	£'000	£'000
Fixed assets at cost	500	650
Less: Accumulated depreciation	200	300
	300	350
Investments at cost	200	50
Current assets		
Stock	400	700
Debtors	1,350	1,550
Cash at bank	100	–
	1,850	2,250
Current liabilities		
Bank overdraft	–	(60)
Creditors	(650)	(790)
Taxation	(230)	(190)
Proposed dividends	(150)	(130)
	(1,030)	(1,170)
	1,320	1,480
Capital and reserves		
Called-up share capital (£1 ordinary shares)	500	750
Share premium account	150	200
Profit and loss account	670	530
	1,320	1,480

Notes:

1) During the year to June 30th, 20X1, some fixed assets originally costing £25,000 had been sold for £20,000 in cash. The accumulated depreciation on these fixed assets at June 30th, 20X0 amounted to £10,000. Similarly, some of the investments originally costing £150,000 had been sold for cash at their book value.

2) The taxation balances disclosed in the above balance sheets represent the actual amounts agreed with the tax authorities. All taxes were paid on their due dates.

3) No interim dividend was paid during the year to June 30th, 20X1.

4) During the year to June 30th, 20X1, the company made a 1–for–2 rights issue of 250,000 ordinary £1 shares at 120p per share.

Required:

Prepare the cash flows statement in a good style for the year ended June 30th, 20X1.

☺ Answer

Note 1. Reconciliation of operating profit to net cash flow from operating activities

	£'000
1. Operating profit ((530 – 670) + 130 + 190)[1]	180
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation (300 – 200 + 10)[2]	110
Less: Profit on disposal (25 – 10 – 20)[3]	(5)
3. Current assets adjustments:	
Less: Increase in stock (700 – 400)	(300)
Less: Increase in debtors (1,550 – 1,350)	(200)
4. Current liabilities adjustments:	
Add: Increase in creditors (790 – 650)	140
Net cash flow from operating activities	(75)

Iota Ltd. Cash Flow Statement for the year ended June 30th, 20X1

	£'000	£'000
1. Net cash flow from operating activities (Note 1)		(75)
2. Returns on investment and servicing of finance[4]		–
3. Taxation paid[5]		(230)
4. Capital expenditure and financial investments		
Receipts from sale of fixed assets	20	
Receipts from sale of investments	150	
Payments to acquire fixed assets (650 – 500 + 25)[6]	(175)	(5)
5. Acquisitions and disposals of subsidiaries		–
6. Equity dividends paid[7]		(150)
7. Management of liquid assets		–
Net cash flow before financing		(460)
8. Financing		
Proceeds from issue of shares ((750 – 500) + (200 – 150))[8]		300
Net cash outflow for the year		(160)
Bank overdraft at the end of the year	(60)	
Less: Cash balance at the beginning of the year	(100)	
Net decrease in cash		(160)

! Hint

[1] Since the profit and loss account is not given, we need to calculate profit before interest and tax. The difference between the figures on the profit and loss account in the balance sheet at the end and at the beginning of the year is the retained profit for the year. Then we need to add back dividends for the year, taxation and interest expense. Dividends for the year equal to proposed dividends in current liabilities since there were no interim dividends and we assume all final dividends to be unpaid. Taxation for the year is also the amount of taxation in current liabilities, according to Note 2. Finally, the interest expense is zero since the company has no long-term liabilities.

[2] The accumulated depreciation at the beginning of the year was £200,000. Then the company sold some fixed assets with the accumulated depreciation of £10,000. Finally, the company depreciated the remaining assets by £X before it arrived at the final figure of £300,000. Hence, the depreciation expense is found from the following equation: 200,000 – 10,000 + X = 300,000.

[3] The company sold the fixed assets for £20,000, while their NBV was £(25,000 – 10,000).

[4] Since there is no information about investment income, and the company has no long-term liabilities, interest expense is assumed to be zero.

[5] According to Note 2, the company has not paid the taxation for the year, which is still its current liability. But then, the company must have paid its liability for taxation at the beginning of the year of £230,000.

[6] The cost of fixed assets at the beginning of the year was £500,000. Then the company bought some new fixed assets for X. It also sold some fixed assets costing £25,000. In the end, it has £650,000 of fixed assets. So, 500,000 + X – 25,000 = 650,000.

[7] According to Note 3, the total dividend for the year equals to proposed dividends at the end of the year, which are still unpaid. Then, the company must have paid its proposed dividends for the previous year £150,000.

[8] The company issued 250,000 rights and sold them for £1.2 x 250,000 = £300,000 in cash. The par value of £250,000 was credited to called-up share capital account and the premium of £50,000 was credited to share premium account.

? Question 5

The directors of Theta Plc are extremely concerned about new trend in the company's market share price. The following information has been extracted from the books for two years ending December31th.

Profit and Loss Accounts

	1998 £'000	1999 £'000
Sales revenues	93,000	200,000
Profit before taxation	9,500	19,495
Taxation	(3,200)	(5,200)
Profit after taxation	6,300	14,295
Dividends:		
preference	(100)	(100)
ordinary: interim (paid)	(1,000)	(2,000)
final (proposed)	(3,000)	(6,000)
Retained profit for the year	2,200	6,195

Balance Sheets as at December 31st

	1998 £'000	1999 £'000
Fixed assets		
Plant, machinery, equipment, at cost	17,600	23,900
Accumulated depreciation	9,500	10,750
	8,100	13,150
Current Assets		
Stocks	5,000	15,000
Trade debtors	8,600	26,700
less: Provision for doubtful debts	(430)	(1,335)
Prepayments	300	400
Cash at bank and in hand	600	–
	14,070	40,765
Creditors: amounts due within 1 year		
Bank overdraft	–	16,200
Trade creditors	6,000	10,000
Accruals	800	1,000
Taxation	3,200	5,200
Dividends	3,000	6,000
	13,000	38,400
Working capital	1,070	2,365
Total assets less current liabilities	9,170	15,515
Creditors: amounts due after more than 1 year		
15% debentures	600	750
	8,570	14,765
Share capital		
Ordinary shares of £l each	5,000	5,000
10% preference shares of £l each	1,000	1,000
Profit and loss account	2,570	8,765
	8,570	14,765

Note:

During the year to December 31st, 1999, fixed assets originally costing £5,500,000 were sold for £1,000,000. The accumulated depreciation on these assets as at December 31st, 1998 was £3,800,000.

Required:

a) Prepare a statement that helps to the directors to understand the liquidity position and overall financial performance of the company in 1999.

b) Explain what use this report is in understanding share price movements and indicate what other information might be useful. Refer to your statement, where appropriate, to illustrate your point.

☺ Answer

a) **Note 1. Reconciliation of operating profit to net cash flow from operating activities**

	£'000
1. Operating profit (19,495 + 750 x 0.15)[1]	19,607.5
2. Adjustments for non-cash revenues and expenses:	
Add: Depreciation (10,750 – 9,500 + 3,800)	5,050
Add: Increase in provision for bad and doubtful debts (1,335 – 430)	905
Add: Loss on disposal (5,500 – 3,800 – 1,000)	700
3. Current assets adjustments:	
Less: Increase in stocks (15,000 – 5,000)	(10,000)
Less: Increase in trade debtors (26,700 – 8,600)	(18,100)
Less: Increase in prepayments (400 – 300)	(100)
4. Current liabilities adjustments:	
Add: Increase in creditors (10,000 – 6,000)	4,000
Add: Increase in accruals (1,000 – 800)	200
Net cash flow from operating activities	2,262.5

Theta Plc. Cash Flow Statement for the year ended December 31st, 1999

	£'000	£'000
1. Net cash flow from operating activities (Note 1)		2,262.5
2. Returns on investment and servicing of finance		
Interest paid (750 x 0.15)[1]	(112.5)	
Dividends on preference shares paid[2]	(100)	(212.5)
3. Taxation paid (3,200 + 5,200 – 5,200)		(3,200)
4. Capital expenditure and financial investments		
Receipts from sale of fixed assets	1,000	
Payments to acquire fixed assets (23,900 – 17,600 + 5,500)	(11,800)	(10,800)
5. Acquisitions and disposals of subsidiaries		–
6. Equity dividends paid (2,000 + 3,000)[2]		(5,000)
7. Management of liquid assets		–
Net cash flow before financing		(16,950)
8. Financing		
Increase in long-term liabilities (750 – 600)		150
Net cash outflow for the year		(16,800)
Bank overdraft at the end of the year	(16,200)	
Less: Cash at bank and in hand at the beginning of the year	(600)	
Net decrease in cash		(16,800)

b) The CFS is one of the major financial statements which companies prepare. It is prepared on cash basis and shows which activities are cash-generating and which, on the contrary, spend cash. Thus, it shows the movements of the most important asset, cash, and is very helpful for valuation purposes.

This company's market share price goes down and the CFS may help us understand why:

- ✓ The company has a significant cash outflow what means that the company may have problems with liquidity, and the shareholders may be concerned about future dividends.
- ✓ The company issued 15% debentures for £150,000; this will lead to increased interest expense next years and lower profit available for appropriation as dividends.

But the CFS shows that such a significant cash outflow during the year is a result of the company's expansion:

- ✓ The company invested in current assets, mainly, in stocks and debtors. But this is not bad since it will result in cash inflows next year when the stock is sold and the debtors repay their debts.
- ✓ The company acquired a lot of new fixed assets, which are supposed to bring benefits in the future.

Also we can see from the CFS that the company pays its interest expense, taxation and dividends on time. Moreover, the ordinary dividends are increased this year; probably the company is trying to signal to its shareholders that it has good future prospects.

So, we can conclude that the company has temporary problems with liquidity due to the acquisition of new assets, but it expects to earn higher profits in future resulting from its expansion. Therefore, although dividends may decrease in the nearest future, and the shareholders are already concerned, the benefits from the expansion later may overweight the current problems and the company's shares may provide a total return higher than the competitors' shares.

But in order to be more certain with our conclusions, some additional information is required:

- ✓ It would be helpful to look at the financial reports (which consist of the BS, the P&L account and the CFS) for several consecutive years in order to see the trends in the company's financial performance.
- ✓ The company's budgets will also shed light on its future prospects. For example, we would be interested in the budgeted sales and profit after tax: will the rising trend of 1998–1999 continue? Is the company going to increase dividends next years? How the company is going to repay its huge bank overdraft?
- ✓ It would be interesting to know what is going on in the industry as a whole. The company should be compared to the similar companies in the industry. If the company is growing while others do not, probably, it is worth buying its shares.
- ✓ Finally, some qualitative information like announcements in newspapers about a launch of a new product, a planned change of the management team, expected mergers or acquisitions, etc., should be taken into account when analysing the share price movements.

! Hint

[1] Since no information on interest expense is given, we assume that the interest is due on all debentures issued at the end of the year. Hence, the interest expense equals £750,000 x 0.15 = £112,500, and it was fully paid during the year.

[2] The liability for dividends at the end of the year amounts to £6,000 in the balance sheet and equals exactly to the final ordinary dividends proposed in the profit and loss account. This means that all other dividends, in particular, preference and ordinary interim dividends and the liability for dividends at the end of the previous year, were paid during the year.

Part 2. Problems and Essay-type Questions

Chapter 3. Accounting for Current Assets

? Question 1

Mr. Iota sets up a business on January 1st, 2006. His purchases and sales in the first 3 months of trade were as follows:

Purchases:

Date	Units	Price
1.1.2006	20,000	$5
1.2.2006	60,000	$6
1.3.2006	32,000	$8

Sales:

Date	Units	Price
10.1.2006	12,000	$12
15.2.2006	24,000	$15
12.3.2006	36,000	$16

Required:

a) Calculate the stock on the balance sheet at March 31st, 2006, using the FIFO basis.

b) Calculate the cost of goods sold in the profit and loss account in the 3 months ended March 31st, 2006, using the FIFO basis.

c) Calculate the stock on the balance sheet at March 31st, 2006, using the LIFO basis.

d) Calculate the cost of goods sold in the profit and loss account in the 3 months ended March 31st, 2006, using the LIFO basis.

e) Calculate the stock on the balance sheet at March 31st, 2006, using the AVCO basis.

f) Calculate the cost of goods sold in the profit and loss account in the 3 months ended March 31st, 2006, using the AVCO basis.

g) Prepare the trading accounts under all three bases.

h) Explain briefly, the arguments in favour of each of the basis of accounting.

☺ Answer

a) The FIFO (first in – first out) method is a method of calculating the value of the closing stock and the cost of goods sold, which assumes that a company sells the stock in the same order as it buys it, in other words, the first units purchased are the first ones to be sold. In fact, the actual flow of goods does not matter; this assumption is only used for assigning some cost to the sold units consistently.

According to this method, the closing stock is the stock left from the latest purchases, and it should be valued at the most recent acquisition cost[11].
Since the company purchased 112,000 units in total and sold 72,000 units, it has 40,000 units in closing stock. The cost of this closing stock is 32,000 x $8 + 8,000 x $6 = $304,000.

b) Since the first units bought are the first ones to be sold according to the FIFO method, and the company sold 72,000 in total, the cost of these sales is 20,000 x $5 + 52,000 x $6 = $412,000.

c, d) The LIFO (last in – first out) method, as opposed to the FIFO method, assumes that we sell goods from the latest purchases first. But here we need to distinguish between the perpetual and the non-perpetual systems of inventory accounting[12].
According to the *non-perpetual system*, the dates of purchases and sales do not matter. Since the last units bought are sold first, the closing stock should be valued at the earliest prices. Therefore, the cost of the closing stock is 20,000 x $5 + 20,000 x $6 = $220,000 and the cost of sales is 32,000 x $8 + 40,000 x $6 = $496,000.
According to the *perpetual system*, a company cannot sell goods from the future purchases, therefore, the dates of purchases and sales are important. The cost of a unit sold is considered to be the cost of the latest purchase before the date of the sale of this unit. Hence, the cost of goods sold is 12,000 x $5 + 24,000 x $6 + 32,000 x $8 + 4,000 x $6 = $484,000. Then, the remaining units will be in the closing stock: (20,000 – 12,000) x $5 + (60,000 – 24,000 – 4,000) x $6 = $232,000.

e, f) According to the AVCO (average costing) method, we need to calculate the average cost and value both the cost of sales and the closing stock at this average cost. Again, the perpetual and the non-perpetual systems will give different results.
According to the *non-perpetual system*, the average cost during the whole period is (20,000 x $5 + 60,000 x $6 + 32,000 x $8)/112,000 = $6.3928. Hence, the closing stock is 40,000*$6.3928=$255,714 and the cost of goods sold is 72,000 x $6.39 = $460,286.
According to the *perpetual system*, the average cost is calculated on the basis of goods in stock at the date of a sale, and it is different at different dates.
On 10.1.2006 the average cost is $5, hence the cost of goods sold on that date is 12,000 x $5 = $60,000 and the closing stock is 8,000 x $5 = $40,000.

[11] Remember that stock is valued at its acquisition cost, not a selling price, due to the cost concept of accounting.
[12] If it is not specified in the question which system to use, you are free to assume any one. It is not required to give calculations for the both systems, if it is not stated explicitly.

On 15.2.2006 the average cost is (8,000 x $5 + 60,000 x $6)/68,000 = $5,88235, hence the cost of goods sold on that date is 24,000 x $5,88235 = $141,176 and the closing stock is (68,000 – 24,000) x $5.88235 = 44,000 x $5.88235 = $258,823.

On 12.3.2006 the average cost is (44,000 x 5.88235 + 32,000 x $8)/76,000 = $6.77399, hence the cost of goods sold on that date is 36,000 x $6.77399 = $243,864 and the closing stock is (76,000 – 36,000) x $6.77399 = $270,960.

So, the total cost of goods sold during the three months is $60,000 + $141,176 + $243,863 = $445,040 and the closing stock at 31.3.2006 is 40,000 x 6.77 = $270,960.

g) The trading accounts for the three months ended March 31st, 2006:

	FIFO	LIFO		AVCO	
		Non-Perpetual	Perpetual	Non-perpetual	Perpetual
	$	$	$	$	$
Sales	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000
Purchases	716,000	716,000	716,000	716,000	716,000
less: Closing stock	(304,000)	(220,000)	(232,000)	(255,714)	(270,960)
Cost of sales[13]:	412,000	496,000	484,000	460,286	445,040
Gross profit	668,000	584,000	596,000	619,714	634,960

h) Since the FIFO basis values the closing stock at the most recent prices, it gives the most relevant figure for the closing stock, and, hence, it is good for the balance sheet. But the cost of goods sold is valued at the earlier prices, which are usually lower, hence this method underestimates the cost of goods sold and overestimates the profit, adding to the profit a so-called "holding gain" arising because of the general inflation.

The LIFO basis values cost of sales at the most recent acquisition cost, hence, the time gap between sales and purchases is the smallest, and the matching concept is satisfied better. Therefore, this method is better for the profit and loss account, but it gives irrelevant figure for the closing stock in the balance sheet, since the closing stock is valued at the oldest cost.

The AVCO basis gives figures for both the cost of sales and the closing stock between the ones given by FIFO and LIFO, hence, it is more neutral, but its disadvantage is that it uses artificially calculated average cost and may be too complicated when there are large flows of goods.

[13] Actually, the cost of goods sold in parts "b", "d" and "f" could have been found via subtracting the cost of closing stock from the purchases, as we do here in the trading account. This could have saved some time.

? Question 2

Company Kappa buys 5 desks for $1,400 each and sells 4 at a gross margin of 30%.

Company Kappa buys 20 chairs and sells 12 of them for $665 each with a mark-up of 40%.

Required:

Prepare the trading account for company Kappa and state the closing stock and the gross profit.

☺ Answer

We need to find the selling price of the desks and the cost of the chairs.

Gross margin = Gross profit / Selling price =>

Gross profit = Selling price – Cost = Selling price x 0.3 =>

0.7 x Selling price = Cost =>

Selling price (of desks) = Cost / 0.7 = $1,400/0.7 = $2,000.

Mark-up = Gross profit / Cost =>

Selling price – Cost = Cost x 0.4 =>

Cost (of chairs) = Selling price / 1.4 = $665/1.4 = $475.

Kappa Trading Account

	$	$
Sales (4 x 2,000 + 12 x 665)		15,980
Purchases (5 x 1,400 + 20 x 475)	16,500	
Less: Closing stock (1 x 1,400 + 8 x 475)	(5,200)	
Cost of sales (4 x 1,400 + 12 x 475)		(11,300)
Gross profit		4,680

? Question 3

An art dealer has bought two paintings during the year. One piece of art was bought for $6,000 and then resold for $11,500. The other seemed to be a fake and it was possible to sell it on the market only for $500. The dealer is really upset since she paid $3,000 for it and expected to sell it for $4,500. However, she is sure that the last painting is a real one. To tell the truth to the market she needs to receive a special document of approval from local government arts agency. The cost of investigation will be $2,500. At the end of the year this painting was still not sold to anyone.

Required:

Carefully explain your approach to calculation of the stock value at the end of the year in two cases:

a) If the dealer pays for the document.

b) If the dealer leaves this possible fake as it is.

☺ Answer

a) The general rule is that stock should be valued at the lower of cost and the net realizable value, which is the expected selling price less any costs which must be incurred prior to the sale at this price. This rule is governed by the prudence concept of accounting. If the dealer pays for the document $2,500, the expected selling price will be 4,500, but the net realizable value now is only $4,500 – $2,500 = $2,000. Since it is lower than the cost of $3,000, this painting should be valued at the net realizable value, not the cost. Hence, the stock value is $2,000.

b) If the dealer does not pay for the document, the expected selling price is only $500. Since it is lower than the cost, the painting should be valued at $500 due to the prudence concept, which says that we should anticipate all losses.

? Question 4

The draft accounts of Lambda Plc for the year ended December 31st, 1998 show a net profit before tax of £327,900 and closing trading stock at cost of £253,850 following a physical stock count.

During the audit of the accounts the following matters have come to light:

1) Stock costing £28,000 has been omitted from the closing stock figure.

2) Items included in stock at £13,400, and which would normally be sold for £19,800, were in a damaged state and were worth only £5,200.

3) 4,200 items costing £12 each were recorded on the stock sheets in error as 2,400 items at £22 each.

4) Included in purchases is £37,400 for goods purchased in December and which were received into the warehouse on January 2nd, 1999.

5) Stock costing £22,000 has in error been treated as a fixed asset and depreciation of 10% of cost has been provided for.

6) An item is included in the closing stock valuation at its selling price of £10,200. The gross profit margin on this item is 60%.

Required:

Calculations to show the correct figure for Lambda Plc for

a) Net profit before tax for 1998, and

b) Trading stock at December 31st, 1998.

☺ Answer

The higher is the closing stock figure, the lower is the cost of goods sold and the higher is the profit figure. Therefore, if the closing stock is affected, the profit is affected in the same way.

	Comment	Closing stock	Profit before tax
		£	£
	Balance c/f	253,850	327,900
1	The omitted stock is added	+28,000	+28,000
2	The damaged stock is revalued at the expected selling price, since it is lower	–13,400 + 5,200	–13,400 + 5,200
3	The wrong record is corrected	–2,400 x 22 + 4,200 x 12	–2,400 x 22 + 4,200 x 12
4	The purchased goods are added to the closing stock, they are goods in transit	+37,400	+37,400
5	Stock is added, but depreciation is reduced, increasing profit	+22,000	+22,000 + 2,200
6	The item is revalued at cost instead of the selling price	–10,200 + 0.4 x 10,200	–10,200 + 0.4 x 10,200
	Balance b/f	324,530	400,780

? Question 5

You are provided with the following information concerning a trading company which sells all its goods at cost plus 40%.

	April 1st, 2004	March 31st,2005
	£	£
Trade creditors	1,100	3,100
Trade debtors	1,250	2,000
Stock at cost	5,000	5,900

Assume that all sales and purchases are made on credit. Due to its past reputation for paying on time, the company is typically offered 60 days credit by its trade creditors. During the year £8,500 was paid to trade creditors from the company's bank account.

Required:

a) Calculate cash received from trade debtors during the year.

b) Calculate the trade credit period taken from suppliers using an appropriate ratio. Briefly explain what your answer reveals about the company's control of trade creditors.

☺ Answer

a) Since we know the balances on the trade creditors account at the beginning and at the end of the financial year and the payment to them during the year, we can calculate the value of goods purchased during the year (as all purchases were made on credit):

Creditors $_{01.04.04}$ + Purchases – Payments = Creditors $_{31.03.05}$ = >

Purchases = 3,100 + 8,500 – 1,100 = £10,500.

Now we can calculate the cost of goods sold during the year:

Stock $_{01.04.04}$ + Purchases – Cost of goods sold = Stock $_{31.03.05}$ =>

Cost of goods sold = 5,000 + 10,500 – 5,900 = £9,600.

Since the company sells its stock at cost plus 40%, its sales totalled £9,600 x 1,4 = £13,440.

Now we can calculate cash received from debtors assuming that all sales were made on credit:

Debtors $_{01.04.04}$ + Sales – Cash received = Debtors $_{31.03.05}$ =>

Cash received from debtors = 1,250 + 13,440 – 2,000 = £12,690.

b) Trade credit period = Average creditors / Purchases on credit x 365 days =

$$= \frac{\frac{1{,}100 + 3{,}100}{2}}{10{,}500} * 365 days = 73 days .$$

We see that the company repays its debts to the creditors after 73 days on average, which is longer than the typical credit period of 60 days. This means that the company does not manage to pay its debts on time, probably due to bad creditors control procedures (e.g. the company does not trace when the payment is due) or bad liquidity position (e.g. it does not have enough cash to repay the debts on time).

? Question 6

Mu Ltd is preparing its annual accounts for the year ended April 30th, 2006 and, at that date, its trade debtors totalled £162,000. Included in this total is £7,200 owed by Nu who was made bankrupt in October 2005 and is expected to pay only 10% of his debt. In November 2005, a former customer Xi Ltd paid £600 in respect of a debt written off in 2004; the cash received was credited to a suspense account.

On May 1st, 2005 there was a provision for bad and doubtful debts of £7,200. This is to be adjusted to 5% of the closing figure for trade debtors as at April 30th, 2006.

Required:

Give calculations to show the net figure for:

a) bad and doubtful debts to be included in the profit and loss account for the year ended April 30th, 2006, and

b) trade debtors to be shown in the year-end balance sheet. Where would you expect to find this in the balance sheet? Why?

☺ Answer

a) Bad debts in the profit and loss account are those debts which will not be repaid for sure. So, 90% of the Nu's debts was bad debt, which amounted to £6,480. The journal entry was the following:

Dr Bad debts written off £6,480 (P&L)

Cr Debtors £6,480 (BS).

Since the debt of Xi Ltd was written off in the previous year as a bad debt, but now it was repaid, we should treat it as revenue by decreasing bad debts written off:

Dr Suspense account £600

Cr Bad debts written off £600 (P&L).

Therefore, the final figure in respect of the bad debts in P&L is £5,880.

Concerning the doubtful debts (those debts which will not be repaid with some probability), a change in provision for doubtful debts was reflected in the profit and loss account. The company's debtors on April 30th, 2006 amounted to 162,000 – 6,480 = £155,520. Therefore, the provision for doubtful debts on April 30th, 2006 should be equal to 0.05 x 155,520 = £7,776. Since the provision on May 1st, 2005 was only £7,200, it should be increased by £576:

Dr Increase in provision for doubtful debts £576 (P&L)

Cr Provision for doubtful debts £576 (BS)

Hence, the total net figure in respect of both bad and doubtful debts in the profit and loss account was 5,880 + 576 = £6,456.

b) In the balance sheet as at April 31st, 2006 we will find the following in respect of trade debtors:

Current assets	£
…	
Trade debtors	155,520
less: Provision for doubtful debts	(7,776)
	147,744

Trade debts are a company's current assets since it is a liability of the company's customers which arises from sales on credit terms. The right for this money, in fact, belongs to the company, even if the money has not yet been transferred. Therefore, it is an asset for the company.

Chapter 4. Accounting for Non-current Assets

? Question 1

The equipment owned by Omicron Ltd at May 1st, 2005 cost £500,000 and accumulated depreciation at that date was £150,000. The depreciation policy for equipment was to use the straight-line method at the rate of 20% per year. It was charged for a full year in the year of purchase but no depreciation was charged in the year of sale.

In July 2005, new equipment was purchased for £120,000; it has no residual value. Equipment purchased in August 2001 for £50,000 was sold in January 2006 for £8,000.

Required:

a) Give calculations to show the charge in respect of equipment that would appear in the profit and loss account for the year ended April 30th, 2006.

b) Draw a suitably headed extract from the company's end of year balance sheet showing all figures relating to equipment.

☺ Answer

a) We could find two entries in respect of the equipment in the profit and loss account: the depreciation expense and the profit or loss on disposal.

The cost of equipment at April 30th, 2006 is 500,000 + 120,000 – 50,000 = £570,000. This cost had to be depreciated at the rate of 20% using the straight-line method. Hence, the depreciation expense for the year was 0.2 x 570,000 = £114,000.

The accumulated depreciation for the equipment bought in August 2001 was 50,000 x 0.2 x 4 years = £40,000 and its net book value in January 2006 was £10,000. Since the company sold the equipment cheaper than its NBV, it incurred a loss on disposal of £2,000, which was shown in the P&L account.

The extract from the profit and loss account for the year ended April 30th, 2006 (£'000):

…

Expenses:

Depreciation expense	114
Loss on disposal	2

…

b) **The extract from the balance sheet as at April 30th, 2006 (£'000):**

Fixed assets	Cost	Provision for depreciation	NBV
Equipment	570 (500 + 120 – 50)	224 (150 – 40 + 114)	346 (570 – 224)

? Question 2

Mr. Pi commenced business on October 1st, 2003 purchasing fixtures and fittings for £25,000 and a motor vehicle for £16,000. The fixtures and fittings were estimated to have a useful life of 8 years and a residual value of £1,800. Further fittings were purchased on November 1st, 2004 for £15,200 with nil residual value and a useful life of 8 years.

During December 2004 the motor vehicle was involved in an accident and the insurance assessors considered it a write-off. A cheque for £3,200 was received in December from the insurers in full settlement. Another vehicle was purchased on January 5th, 2005 at a price of £18,500.

The depreciation policy of Mr. Pi is to charge a full year in the year of purchase and none in the year of disposal, and to depreciate fixtures and fittings on a straight-line basis and vehicles by 25% reducing balance.

Required:

a) Set out the entries required in respect of fixed assets in the profit and loss accounts of Mr. Pi for the years ended September 30th, 2004 and 2005.

b) Set out extracts for fixed assets from the balance sheets of Mr. Pi as at September 30th, 2004 and 2005.

☺ Answer

a) In the P&L for the year ended September 30th, 2004 we could find depreciation expense for fixtures and fittings and for motor vehicles:

Depreciation expense (fixtures and fittings) = £(25,000 – 1,800)/8 years = £2,900.

Depreciation expense (motor vehicles) = £16,000 x 0.25 = £4,000.

In the P&L for the year ended September 30th, 2005 we would find three entries in respect of fixed assets: depreciation expense for fixtures and fittings, depreciation expense for motor vehicles and profit or loss on disposal of motor vehicles:

Depreciation expense (fixtures and fittings) = depreciation expense of the old fixtures and fittings plus depreciation expense of the further fittings = £2,900 + £15,200/8 years = £4,800.

Since the vehicle bought on October 1st, 2003 was written off after the accident, it is not depreciated. Therefore, we only depreciate the new vehicle bought on January 5th, 2005, and we charge the full year depreciation on it according to the company's policy:

Depreciation expense (motor vehicles) = £18,500 x 0.25 = £4,625.

The vehicle which got into the accident had net book value at the time of the accident of £16,000 – £4,000 = £12,000. Since the company received only £3,200 for this vehicle from the insurers, it incurred loss on disposal of 12,000 – 3,200 = £8,800:

Loss on disposal (motor vehicles) = £8,800

b) **The extract from the balance sheet as at September 30th, 2004 (£):**

Fixed assets	Cost	Provision for depreciation	NBV
Fixtures and fittings	25,000	2,900	22,100
Motor vehicles	16,000	4,000	12,000
	41,000	6,900	34,100

The extract from the balance sheet as at September 30th, 2005 (£):

Fixed assets	Cost	Provision for depreciation	NBV
Fixtures and fittings	40,200 (= 25,000 + 15,200)	7,700 (= 2,900 + 4,800)	32,500
Motor vehicles	18,500	4,625	13,875
	58,700	12,325	46,375

? Question 3

At the beginning of the financial year commencing on April 1st, 19X5, a company Rho had a balance on plant account of £372,000 and on provision for depreciation of plant account of £205,400.

On September 1st, 19X5 the company sold for £13,700 some plant which it had acquired on October 31st, 19X1 at a cost of £36,000. Additionally, installation costs totalled £4,000. During 19X3 major repairs costing £6,300 had been carried out on this plant and, in order to increase the capacity of the plant, a new motor had been fitted in December 19X3 at a cost of £4,400. A further overhaul costing £2,700 had been carried out during 19X4.

The company acquired a new replacement plant on November 30th, 19X5 at a cost of £96,000, inclusive of installation charges of £7,000.

The company's policy is to provide depreciation using the reducing balance method applied to the fixed assets held at the end of the financial year at the rate of 20 % per annum.

Required:

Calculate the following:

a) the balance of plant at cost at March 31st, 19X6,

b) the provision for depreciation of plant at March 31st, 19X6,

c) the profit or loss on disposal of the plant.

☺ Answer

a) To find the final cost of plant we need to take the initial balance, subtract the cost of the sold plant and add the cost of the new replacement plant. The cost of the sold plant consists not only of the cost of the plant itself, but also of the additional costs capitalized on the balance sheet, being the costs without which the plant would not have become operational. The installation costs and the cost of the new motor had been definitely capitalized. For simplicity, we assume that the major repairs and the further overhaul had not been capitalized on the plant account, but were written off in the P&L accounts for the corresponding years.

Therefore, the balance of plant at cost at 31 March 19X6 = £(372,000 – 36,000 – 4,000 – 4,400 + 96,000) = £423,600.

b) To find the provision for depreciation at the end of the financial year we need to take the provision for depreciation at the beginning of the year, subtract the accumulated depreciation of the sold plant and add the depreciation expense for the year.

(цифры внизу должны быть в колонке)

The accumulated depreciation of the sold plant is calculated as follows:	£'000
Dep'n expense for the year ended 31.03.19X2 (0.2 x (36 + 4))	8
Dep'n expense for the year ended 31.03.19X3 (0.2 x (36 + 4 – 8))	6.4
Dep'n expense for the year ended 31.03.19X4 (0.2 x (36 + 4 – 8 – 6.4 + 4.4))	6
Dep'n expense for the year ended 31.03.19X5 (0.2 x (36 + 4 – 8 – 6.4 + 4.4 – 6))	4.8
	25.2

The depreciation expense for the year is 20% of the net book value of the remaining assets and equals 0.2 x £(423,600 – (205,400 – 25,200)) = £48,680.

Therefore, the balance on the provision for depreciation account at March 31st, 19X6 is £(205,400 – 25,200 + 48,680) = £228,880.

c) The net book value of the sold plant at the time of disposal was £(36,000 + 4,000 + 4,400-25,200) = £19,200. Since the company sold the plant for only £13,700 it uncured loss on disposal of £(19,200 – 13,700) = £5,500.

? Question 4

Sigma Ltd purchased a machine on January 1st, 1999 for £100,000. Transporting the machine to its factory cost £1,600 and £1,000 was spent on installing it. Maintenance of the machine cost £750 in 1999 and the expenditure on maintenance increased by £200 in each of the following four years. The machine was expected to last until December 31st, 2006 with a scrap (or residual) value at that date of £6,600.

The machine was sold for £34,000 on June 30th, 2003.

The company uses the straight-line method of depreciation. It provides for a full year's depreciation in the year of acquisition and none in the year of sale.

Required:

a) Give the following calculations:

(i) the depreciation charges for 1999,

(ii) the profit or loss on sale of the machine in 2003.

b) Explain in what circumstances straight-line method would be the most appropriate method of depreciation.

☺ Answer

a) (i) Transportation and installation costs were capitalized on the balance sheet, while maintenance costs were written off in the P&L. Therefore, the capitalized cost of the machine was £(100,000 + 1,600 + 1,000) = £102,600.

Then the depreciation expense was £(102,600 – 6,600)/8 years = £12,000 per year.

(ii) The net book value of the machine at the time of disposal was £(102,600 – 4 x 12,000) = £45,600. Then the loss on sale equalled £(45,600 – 34,000) = £11,600.

b) Since fixed assets are depreciated in order to match some expense against the benefits which the asset brings each year, that depreciation method should be chosen which provides better matching. Since according to the straight-line method the depreciation expense is the same each year, this method should be applied to those assets which bring approximately the same benefits each year. Usually these assets have limited useful life because of the time or economic factors, and not because of physical deterioration or depletion. Such assets may be, for example, buildings, office equipment, licenses, goodwill.

? Question 5

It is accepted accounting practice to depreciate certain fixed assets. Explain what you understand by the accountant's view of depreciation and what it attempts to measure. Does charging depreciation necessarily ensure that funds are available for replacement of the asset concerned?

☺ Answer

Since fixed asset is an asset which is expected to bring benefits to the company during a period of more than one year, accountants to not subtract the cost of this asset as expense in the period of purchase, but rather capitalize it on the balance sheet and subtract it by some portions during the whole period of use of the asset by means of charging depreciation expense. Thus, depreciation is an allocation of the acquisition cost of an asset less its scrap value over the asset's useful life. Accountants charge depreciation in order to satisfy the matching concept which says that benefits should be matched to costs which those benefits help generate.

Depreciation does NOT attempt to measure by how much the market value of the asset has fallen. The net book value of an asset, being the cost less the accumulated depreciation, is not an estimate of the asset's current market price. Depreciation attempts to measure how much benefits an asset brought during the period in relation to all expected benefits from the asset. But, of course, depreciation is a rough estimate, since it is calculated consistently using some method chosen when the asset was bought. Also it should be noted that depreciation is just an accounting entry, which has no underlying cash flows.

Although charging depreciation does not involve cash outflows, it does not mean the company has enough cash to replace the fixed asset. A company may have a healthy profit and a bank overdraft at the same time. In order to have funds for replacement of fixed assets a company should save cash, but this has nothing to do with depreciation, which is charged for another purpose.

? Question 6

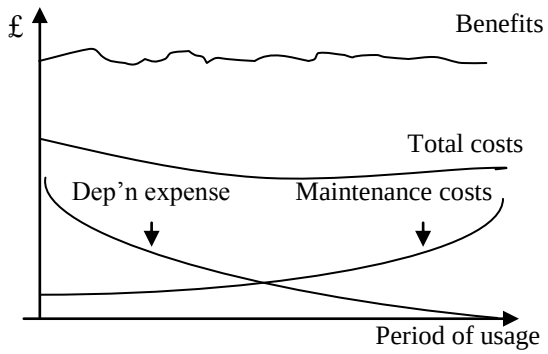
"I am confused by Tau Plc's present depreciation policy on motor vehicles. Surely motor vehicles should be depreciated using the reducing balance method rather than the straight-line method in order to provide a 'true and fair' view in the accounts."

Required:

Discuss, with direct reference to the accountant's view of depreciation, what you regard as the most appropriate method of depreciating Tau Plc's motor vehicles. In your answer explain whether the choice of the method affects the total amount of depreciation expenses charged against Tau Plc's profits over the useful life of each vehicle.

☺ Answer

Since motor vehicles are subject to physical deterioration, the maintenance costs increase as vehicles become older. On the other hand, the benefits which motor vehicles generate either remain more or less constant or even decrease with the deterioration. In such a case the most appropriate method of depreciation is the decreasing balance method, according to which the depreciation expenses decrease along the life of an asset, since this method allows better matching of the benefits with the total costs, including the maintenance costs. This idea can be illustrated graphically:



If the straight-line method was used, the depreciation expense time profile would be horizontal and the total costs would be rising over time. This would lead to overestimated profits at the beginning of the vehicle's useful life and underestimated profits at the end of it. So, the decreasing balance method is more suitable for the assets which benefits either decrease over time or remain constant, provided that the maintenance expenses rise.

But no matter which depreciation method is chosen, the total amount of depreciation written off during the whole useful life is the same and equals to the depreciable value of the asset (the cost of the asset less its scrap value). This is so because the purpose of depreciation in accounting is to allocate the depreciable value over the useful life.

? Question 7

The summarised draft balance sheet of Upsilon Plc as at December 31st, 2003 is given below:

	£'millions
Share capital (ordinary shares of £1 each)	60
Share premium	45
Profit and loss account	100
8% debenture loan (repayable 2020)	130
Total assets less current liabilities	335

Upsilon Plc pays a dividend of 10 pence per share each year. The company's current share price is 360 pence per ordinary share. The share price has been static for some time, as the All-Share market index. The debenture loan is quoted at par value.

The company owns freehold property with a historic cost of £115 million. After consulting with a firm of professional property surveyors, Upsilon's directors believe that these properties have a current market value of £220 million. The directors want to include the market value of freehold property in the published accounts for the year ended December 31st, 2003.

Required:

a) Calculate the book value of the company's gearing ratio before and after the proposed revaluation of freehold properties.

b) Describe the benefits and potential drawbacks for the company and its shareholders of including the freehold properties at a market valuation. Explain your answer carefully.

☺ Answer

a) Gearing ratio may be calculated in two ways:

Gearing = Long-term liabilities / Equity.

Gearing = Long-term liabilities / Capital employed.

Let us take the second formula. Gearing before revaluation = 130 / 335 = 0.38.

If the freehold property is revalued by £(220 – 115) = £105 mln, the following entry is made:

Dr Freehold property £105 mln (BS, FA)

Cr Revaluation reserve £105 mln (BS, K)

Then the balance sheet of Upsilon Plc as at December 31st, 2003 after the revaluation is:

	£'millions
Share capital (ordinary shares of £1 each)	60
Share premium	45
Revaluation reserve	105
Profit and loss account	100
8% debenture loan (repayable 2020)	130
Total assets less current liabilities	440

Therefore, gearing after revaluation = 130 / 440 = 0.29.

b) The main purpose of the revaluation of fixed assets is to provide more relevant information in the balance sheet. If an asset is rising in value consistently and significantly, reporting it at historical cost will provide irrelevant information. But if this asset is reported at the market value by means of periodic revaluations, the information concerning this asset is more up-to-date. The company seems stronger, since it owns more expensive assets. Long-term borrowing for the company will become

easier as it has more assets for collateral. Also the company seems less risky to its shareholders since its capital is increased and gearing is reduced.

The main drawback of revaluation is loss of reliability, since the value of the asset is estimated. But when the value is estimated by an independent professional appraiser, this problem is less significant. Another drawback of revaluation is that return on equity becomes smaller, since equity is larger. Therefore, the company may seem less attractive to potential shareholders. Also revaluation is a costly process.

Nevertheless, such assets as land and brand names are often revalued since the benefits of revaluation overweight the costs.

? Question 8

In the so-called new economy intangible assets are said to be of more importance than tangible assets yet they seldom appear on balance sheets. Why is this? Include in your answer an explanation of what you mean by the term ‘asset’ as used by accountants.

☺ Answer

Intangible assets are the assets which do not have physical substance but bring benefits to their owners. Usually they represent some knowledge, rights and relationships which are beneficial to the company. For example, good location, human capital, research and development, brand names, licences, trademarks, patents, goodwill are all intangible assets.

It is true that for some companies such assets are of major importance since due to them these companies earn supernormal profits (e.g. Microsoft, Google, Coca-Cola, Manchester United). Of course, reporting these assets on the balance sheets would make the information much more relevant. For example, Google has hardly any other assets besides its name which is worth billions of dollars.

Then why do they seldom appear in balance sheets? The reason is that such assets are extremely unreliable and often do not satisfy the asset recognition criteria:

1. An asset must be owned or controlled by the company as a result of a past event.
2. An asset must be separately identified (e.g. it must have a separate market where it can be sold separately from the company).
3. An asset must bring reliable future benefits.
4. An asset must have a reliable measure of cost.

If an asset does not satisfy at least one of the criteria it cannot be reported in the balance sheet. Of course, there are some intangible assets which satisfy all four criteria, e.g. purchased brand names,

licences, trademarks, copyrights, purchased goodwill. Such assets are reported exactly in the same way as tangible ones, i.e. capitalised on the balance sheet and amortised or revalued.

But most of intangible assets do not satisfy the above criteria. For example, internally generated brand names do not have reliable cost, cannot be separately identified (unless valued by an appraiser and registered) and have uncertain future benefits. The same problems concern knowledge, location, skills of employees, research costs, internally generated goodwill, etc. Therefore, such assets cannot be reported in the balance sheets, since otherwise the information provided will lose its reliability.

? Question 9

At the directors' meeting of Phi Plc at which the draft accounts for the year ended September 30th, 2002 were discussed, the marketing director made the following comment:

"The cost of the recent expenditure on the mailshot and television campaign advertising our products for Christmas 2003 will benefit profits in the year ended September 30th, 2003, I cannot understand why this has all been treated as an expense in the 2002 accounts."

Required:

Evaluate this comment, making reference to any accounting concepts and principles which seem appropriate.

☺ Answer

In general, there are two ways of reporting such kind of expenditure. The first way is to capitalise the expenditure on the balance sheet as an asset and write it down as expense when the benefits from this asset are received. In this case the matching concept will be satisfied, since the benefits from the asset in 2003 will be matched with the costs, and profits will not be overestimated in 2003 and underestimated in 2002. So, this way of reporting is the most relevant, and this view was expressed by the marketing director.

But there is a problem with this way of reporting. In order to capitalize the expenditure, they must satisfy the asset recognition criteria. But the future benefits from this advertising campaign are uncertain since these are just expectations. Therefore, capitalising this expenditure will contradict the prudence concept and make the information unreliable. That is why the accountants have chosen the other way of reporting: to write them off as expense in the period in which they are incurred. This method is most reliable and prudent, although less relevant.

? Question 10

Chi Plc has some purchased brands as assets on its balance sheet but its growth has mostly been through developing its own brands which are now currently worth about £120 million. A director has suggested that these assets should also be reported on the balance sheet and that this would deal with criticism of the company's gearing. Explain to the director whether or not these brands could be reported in the balance sheet, giving reasons.

☺ Answer

The purchased brands indeed satisfy the asset recognition criteria since they are owned as a result of a past acquisition, they have reliable cost and future benefits and they may be sold separately. That is why these brands may be reported in the balance sheet.

But to report internally generated brands is problematic. Although these brands are highly valued by the company since they bring it significant benefits, and providing some information about these brands would be very relevant, the prudence and reliability concepts would be violated. The problem is that the internally generated brands do not have a reliable measure of cost and cannot be separately identified. Their value of £120 million is subjective and cannot be verified until the brands are sold. Therefore, these brands cannot be treated as assets by accountants.

But if the brands were capitalised in the balance sheet, this would create revaluation reserve and indeed decrease the gearing ratio. So, the director is right saying that there would be less criticism of the company's gearing.

? Question 11

The success of many organizations may ultimately be attributed to the skills of their employees. Despite this, however, it seems that the majority of firms makes no attempts to reflect these skills as assets in the balance sheet. Explain this apparent anomaly with direct reference to the definition of an asset.

☺ Answer

Actually this is not an apparent anomaly. Of course, providing some information about such valuable revenue-generating skills in the balance sheet would make the information more relevant and the company would look more attractive. But how can it be done? Normally, the skills of employees do not satisfy the asset recognition criteria. A company does not own these employees in the sense it which it owns tangible assets, because employees may stop working for the benefit of the company or resign unexpectedly. The future benefits from employees are not reliable, since an

employee may get sick, or die, or resign. Finally and, probably, most important, skills of employees cannot be valued reliably since they were not purchased. Therefore, if such skills are put in the balance sheet as assets, the cost and the prudence concepts will be violated.

Due to the above reasons, skills of employees are normally not capitalized in balance sheets (but footballers or artists may be exclusions), but rather get paid periodic wages and salaries, which are matched against the benefits which they generate in the profit and loss account.

? Question 12

The following is an extract from an accounting policy of Manchester United Plc, at that time a UK listed company, as reported in their published annual report:

"Intangible fixed assets: The costs associated with the acquisition of players' registrations are capitalised as intangible fixed assets. These costs are fully amortised in equal annual instalments, over the period of the player's initial contract."

Required:

Explain what you understand by this accounting policy note and why this can be done.

☺ Answer

This accounting policy note states that, unlike ordinary employees, football players are treated by the company's accountants as assets, that is their cost of acquisition is capitalised in the balance sheet. Then this cost is amortised using the straight-line basis over the useful life of these assets, which is determined in the players' contracts.

Why are the football players reported as assets in the balance sheet, while other employees are not? To answer this question we need to refer to the asset recognition criteria and the employment practice. When a football club employs a player, it usually buys this player from another club paying some fixed costs. Therefore, the players have a reliable measure of cost which can be capitalised. In return the player signs a contract which predetermines the period of his work for the club. Thus, we may say that the company controls the player during this period. Of course, the player may go to another club, but in this case that club will pay for this player. This ensures some future benefits from the player even if he goes away from the club.

Therefore, players, who are "traded" in the market, do satisfy all the asset recognition criteria and, thus, their 'price' may be capitalised as intangible assets in the balance sheets of big football clubs, such as Manchester United Plc.

Chapter 5. Accounting in Joint-Stock Companies

? Question 1

Omega Ltd is a newly formed company which estimates that it will need £2 million of initial capital. It proposes to issue 1,000,000 50p ordinary shares on January 1st 2006 at a premium of 40p and 440,000 4% £2 preference shares at par. The balance of the initial required capital will be raised by an issue of 3% loan stock. The estimated profit before interest for the year ended December 31st, 2006 is £200,000. Ordinary dividends are forecast at 5p per share for 2006.

Required:

Calculate the estimated retained profits of Omega Ltd for the year ending December 31st, 2006 and set out the 'share capital and reserves' section of the balance sheet at that date. Taxation is to be ignored.

☺ Answer

The company will collect 1,000,000 x £(0.5 + 0.4) = £900,000 from issue of ordinary shares, since it will sell each share for 90 pence, and 440,000 x £2 = £880,000 from the issue of the preference shares, since they will be sold at par. The remaining £(2,000,000 – 900,000 – 880,000) = £220,000 will be raised by an issue of the loan stocks. Then the appropriation account for the year ended December 31st, 2006 will look as follows:

	£
Profit before interest and tax	200,000
less: Interest expenses (0.03 x 220,000)	(6,600)
Profit before tax	193,400
less: Taxation	-
Profit after tax	193,400
less: Preference dividends (0.04 x 880,000)	(35,200)
less: Ordinary dividends (0.05 x 1,000,000)	(50,000)
Retained profit for the year	108,200

Extract from the balance sheet as at December 31st, 2006

	£
Share capital and reserves:	
Ordinary share capital: 1,000,000 at 50p shares	500,000
Preference share capital: 440,000 4% £2 shares	880,000
Share premium (1,000,000 x 0.4)	400,000
Retained profit	108,200
Net assets	1,888,200

It should be noted that the loan stock is reported under 'long-term liabilities' heading, but not under 'share capital and reserves'.

? Question 2

The following figures appear in the recent draft balance sheet of Alpha Plc:

	£'millions
Issued share capital (£1 shares)	10
Share premium account	36
Retained profits	42
8% debentures 2014	79
Total assets less current liabilities	167

The company's shares are currently quoted at £7.60 per share.

The directors are concerned at the high gearing of the company which has led to criticism in the financial press. They have agreed to implement the following three suggestions, the objectives being to deal with the criticism and to improve the financial structure of the company:

1) The company's freehold land cost £20 million six years ago and has recently been revalued by Green and Brown, chartered surveyors, at £30 million. The revised value is to be reported in the balance sheet.

2) Then a 3 for 1 bonus share issue is to be made.

3) After the bonus issue has been carried out, a 1 for 2 rights issue is to be made at the price of £1.85 per share; it is expected to be fully taken up.

Required:

a) Give calculations to show the effect on the company's balance sheet if each of the three changes above is made. Explain briefly whether each satisfies the stated objectives and is a sensible suggestion.

b) Redraft the balance sheet extract after incorporating the three changes and calculate the company's gearing ratio before and after the changes.

☺ Answer

a) 1) If the revaluation takes place, the following entry is made:

Dr Freehold land £10 mln (BS: FA)

Cr Revaluation reserve £10 mln (BS: K)

As a result, the equity of the company will increase by £10 million and the gearing will decrease. The revaluation will help the company look more stable, and this is a sensible suggestion.

2) A bonus issue is an accounting entry which reclassifies reserves as share capital. A '3–for–1 bonus issue' means that the company issues 3 shares for every one held, so, the company issues 30 mln bonus shares, and it can fully finance the bonus issue by the share premium account. The accounting entry will be the following:

Dr Share premium account £30 mln (BS: K).

Cr Issued share capital £30 mln (BS: K).

As a result, the total amount of equity will not change, as well as gearing. Therefore, the bonus issue will not achieve the objective of lowering gearing. It will have no real impact on the company, only redistribution between the accounts.

3) A rights issue, as opposed to a bonus issue, helps a company raise cash and increase share capital. After the bonus issue there are 40 mln shares outstanding. '1–for–2 right issue' means that the company issues 20 mln rights. Since the rights are expected to be sold at £1.85 each while the par value of a share is £1, the share premium will increase. The accounting entry is the following:

Dr Cash £37 mln (BS: CA) (= 20 mln x £1.85).

Cr Issued share capital £20 mln (BS: K).

Cr Share premium £17 mln (BS: K) (= 20 mln x £0.85).

As a result, the company's equity will rise by £37 mln, and gearing will decrease. Therefore, this is a sensible solution.

b) The extract from the company's balance sheet after the changes will look as follows:

	£'millions
Issued share capital (£1 shares) (10 + 30 + 20)	60
Share premium account (36 – 30 + 17)	23
Revaluation reserve	10
Retained profits	42
8% debentures 2014	79
Total assets less current liabilities	214

We will calculate gearing as Long-term liabilities / Capital employed:

Gearing before the changes = 79/167 = 0.47.

Gearing after the changes = 79/214 = 0.36.

We can see that gearing decreased indeed, and it is likely that there will be less criticism in the financial press.

? Question 3

Beta Plc has the following share capital and reserves as at March 31st, 2005:

	£
100,000 at 25p ordinary shares	25,000
Share premium	30,000
Revaluation reserve	100,000
Retained profit	145,000
	300,000

The current market price of a Beta share is £6.75. The directors want to undertake a bonus (scrip) issue of seven new ordinary shares for every two currently held.

Required:

a) Calculate the capital and reserves section of the balance sheet after the bonus issue, showing full workings.

b) Provide two reasons why the directors would consider undertaking such an issue, and briefly explain its likely impact on the market value of the company's shares.

☺ Answer

a) At present, the company has 100,000 shares issued. A '7–for–2 bonus issue' means that the company issues 350,000 bonus shares, which have the total par value of £0.25 x 350,000 = £87,500. The company may finance this bonus issue by any of its reserves. Normally, the share premium account is used up first, since it has no other use. Thus, we will assume that the company will use the whole share premium account, and the remaining £57,500 will be financed from the retained profit:

Dr Share premium £30,000 (BS: K).

Dr Retained profit £57,500 (BS: K).

Cr Ordinary shares £87,500 (BS: K).

Then the capital and reserves section of the balance sheet after the bonus issue will look as follows:

450,000 at 25p ordinary shares	112,500
Revaluation reserve	100,000
Retained profit	87,500
	300,000

b) By means of a bonus issue a company reclassifies its reserves as share capital. This can be done in order to simplify the balance sheets, e.g. to get rid of the share premium account. Also if a company is growing and accumulating reserves, it might want to transfer them into share capital in order to look bigger (have more shares outstanding).

Since a bonus issue is just an accounting entry, which does not involve any cash flows and does not bring any real changes to the company, the total market value of the company should remain the same as before the issue. The company's market capitalization before the issue was 100,000 x £6.75 = £675,000. But now there are 450,000 shares outstanding, so, in theory, the share price should fall proportionally to £675,000 / 450,000 shares = £1.5 per share.

Of course, in reality, the new share price may differ from £1.5 if the shareholders take the bonus issue as a signal, or if the increased liquidity of the shares due to lower prices creates some additional demand for them. Therefore, increasing liquidity of the shares may be another reason why a company might want to undertake a bonus issue.

? Question 4

Advise Sasha and Masha, the company's directors and the principal shareholders who are considering company's expansion and wish to raise further finance for the business. Sasha believes that a bonus or 'scrip' issue of ordinary shares is the optimal solution, while Masha advises that a 'rights' issue of ordinary shares would be more suitable. Compare these two means of issuing ordinary shares and advise them of the effects and implications of each. Add other options of raising capital that, you believe, should be considered.

☺ Answer

Sasha believes that the bonus issue is the only solution to the problem, but the bonus issue is just an accounting entry and it does not involve any cash inflows to the company. It only involves the capitalization of reserves and issue of additional shares treated as fully paid. The issued share capital of the company increases (as the increase in the number of shares held by the shareholders) without further cash being introduced. The overall value of each person's shareholding is not affected directly by a bonus issue, but the value is spread over a greater number of shares with a proportional reduction of the market price of a share. A bonus issue is a series of bookkeeping entries, which aims to convert reserves and some retained profit into the share capital. Thus, a bonus issue will not solve the company's problem at all.

The rights issue does bring cash to the company, and it is cheaper to arrange than a simple share issue. Rights are issued to the existing shareholders to prevent the dilution of existing shareholders' voting rights, and the price of a right is usually lower than the current market price. Therefore, the

existing shareholders will benefit from buying the rights. So, a rights issue will help the company attract some funds.

As a result, if the directors want to raise funds for the company they should use the rights issue rather than the bonus issue. Other possible sources of financing include the issue of corporate bonds, taking a bank loan, or asking a leasing company to finance acquisition of some fixed assets.

? Question 5

Mr Say has mislaid his copy of the latest accounts for Gamma Ltd, a company in which he owns shares. He provides you with the following information about the company's results for the year ended March 31st, 2005:

Dividend for the year	£4,500
Interest cover	2.5
Tax charge for 2005 (as a % of net profit before tax)	25%
Dividend cover	5

Mr Say asks you to calculate Gamma's interest expense and tax charge for the year ended March 31st, 2005. Provide him with three possible reasons, why the directors of Gamma Ltd have chosen not to distribute all the profit after tax for 2005 as dividend.

☺ Answer

In order to calculate the interest expense and the tax charge, it is important to keep in mind the structure of the appropriation account (see question 1), i.e. the order in which they are subtracted from PBIT.

We will use the ratios given:

Interest cover = Profit before interest and tax / Interest expense.

Dividend cover = Profit after tax / Dividend for the year.

First, from the dividend cover ratio we can find profit after tax:

PAT = Dividend cover x Dividend for the year = 5 x £4,500 = £22,500.

On the other hand, PAT ≡ PBT – Tax = PBT – 0.25 x PBT = 0.75 x PBT.

Therefore, PBT = PAT / 0.75 = £22,500 / 0.75 = £30,000 and tax = 0.25 x £30,000 = £7,500.

But, PBT ≡ PBIT – Interest expense = PBIT – PBIT / Interest cover.

Therefore, PBIT = PBT / (1 – 1/Interest cover) = £30,000 / (1 – 1/2.5) = £50,000 and interest expense = £50,000/2.5 = £20,000.

The company has distributed only one fifths of its profit after tax as dividends. The remaining four fifths have been reinvested into the business. The possible reasons for this are the following. First, the company might have good investment opportunities which are expected to generate return

higher than the shareholders could get themselves. Thus, the company has decided to invest money into these projects rather than distributing it as dividends. The second possible reason is the lack of liquid assets to pay the dividends. Even if the company has generated high profit it may have no cash. In this case the dividends may be cut. The third reason is the dividend policy of the company. If the company has a policy of paying constant or constantly growing dividend each year, it might choose not to deviate from this policy, even if the current year has been extremely profitable, in order not to decrease dividends back next year. Also, if the company expects the next year to be worse, it might want to retain some profit in order to pay dividends out of it next year.

? Question 6

”I own shares in a plc company that has paid a total dividend payment of 43p per share from full year earnings of only 40p per share. This total dividend payment is unsustainable, if not illegal, and needs to be reassessed by management.”

Required:

Discuss the above assertion, clearly explaining the range of issues that should be considered when determining an appropriate dividend level for a public limited company.

☺ Answer

A company may legally pay dividends out of its retained profits, which consist of profit after tax for this year plus accumulated retained profits from the previous years. A company’s dividends cannot exceed its retained profits since all other reserves (e.g. share premium, revaluation reserve, general reserve, etc.) are non-distributable in order to insure nominal capital maintenance.

So, if the company paid dividends higher than its profit after tax for this year, it does not mean that they are illegal. The company may have enough retained profits from the previous years. But it also needs to have enough cash to pay such dividends.

When deciding how much dividends to pay a company should consider its investment opportunities, liquidity position, dividend policy, legal restrictions and expectations about future profits. This company might have had an unlucky year and, in order to keep shareholders interested in the company, they might have decided to increase dividends, distributing some retained profits from the previous years. It may be the case that the company expected this situation and retained some of its profits earlier, distributing less that PAT. Also if the company’s policy is to pay constant dividend, it may have decided not to cut it this year, provided it has enough cash and reserves to sustain it.

Another possible reason is that the company has accumulated a lot of cash, but has no good projects to invest into; therefore it might have decided to distribute this cash to shareholders.

So, there may be different reasons why the company's dividends exceed its profits for the year, but unless they exceed the accumulated retained profits, they are not illegal and should not be reassessed.

? Question 7

Delta Plc has an issued share capital of three million £1 shares. The directors are considering whether the company should buy back and cancel 20% of its issued share capital at the current market price of 280 pence per share.

Required:

Answer the following questions:

a) Why would the directors of a company like Delta Plc wish to buy back and cancel some of its shares?

b) How you consider the buyback should be reflected in the balance sheet of Delta Plc?

c) Would you expect the share price of Delta Plc to remain at 280 pence after the share buyback? Explain your answer.

☺ Answer

a) A company may wish to buy back some of its shares if it thinks that they are undervalued in the market and it wants to create an additional demand for them and raise the share price. Another possible reason is that the company has too much cash and wants to reduce its share capital, since it does not need it. It may also want to change the capital structure having less equity in its capital employed. It may be so if it is cheaper for the company to have more debt rather than equity.

b) When a company buys back 600,000 shares for 280 pence, the following entry is made:

Dr Treasury shares £1,680,000 (BS: K).

Cr Cash £1,680,000 (BS: CA).

Treasury shares are subtracted from issued share capital in the balance sheet:

Issued share capital	£3,000,000
less: Treasury shares	£1,680,000

c) If the company is going to pay the same total dividends next years, dividend per share will rise since dividends are not paid on own shares and there are less shares outstanding. Also the shareholders may view the buy-back as a signal that the shares are undervalued. Due to these reasons the share price is expected to rise.

? Question 8

State your views on the following extract taken from a newspaper: "The company will soon need to incur substantial expenditure on replacement of equipment, but that should cause no problem as the latest balance sheet shows accumulated reserves of £2 million in its capital".

☺ Answer

Accumulated reserves may include share premium, revaluation reserve, retained profit, etc. These are the reserves which the company has accumulated in its equity. But these high reserves do not mean the company has cash reserves of the same amount. For example, the revaluation reserve arises as a result of an accounting entry while there are no underlying cash flows. Share premium account arises if the cash inflow from issue of shares exceeds the par value of these shares. But this cash might have already been spent on purchase of some other assets. The company may also have high retained profit but net cash outflow at the same time. So, the reserves in the company's equity are not matched with cash reserves. And if the company does not have enough cash, it will have problems with the replacement of its equipment since it will need to borrow money. Thus, the statement is not right.

? Question 9

Your friend is thinking about buying shares in Epsilon Plc because its price/earnings ratio is only 6 to 1 whereas the average for the sector in which the company operates is 10 to 1. What would you advise him to do?

☺ Answer

P/E ratio = Market price of one share / Earnings per share.

A lower price/earnings ratio may mean two things. If we assume that the equity market is efficient and the share prices are fair, then the lower market price per each pound of the current EPS means that the future benefits (e.g. dividends) from this company are expected to be lower than from other companies in the industry. In such a case if you buy the shares, you pay less and you receive less in future. So, if the shares are fairly priced, you should be indifferent between buying them or not.

But the equity market may be inefficient and the lower P/E ratio may be due to temporary undervaluation of the company. If the current market price is lower than the fair price, which takes into account the expected future benefits and the required rate of return, then it is worth buying the shares, since the actual return from holding these shares will be higher.

So, in order to decide whether to buy the shares or not, you should compare the market price with the fair one which takes into account the return required for this level of risk. A lower P/E ratio may signal that the expected benefits from holding these shares may be lower as compared to shares of other companies in this sector.

? Question 10

"Do you think the shares of Zeta Plc are worth buying at the present price of 140 pence? I see from the balance sheet that the net assets per share are 210 pence. Why are the two figures different?"

Required:

Answer the above question.

☺ Answer

First, it is important to understand what these two figures mean. The market price is usually calculated as the present value of expected dividends, which are discounted at the rate equal to the required return for the company's level of risk. Therefore, the market price takes into account the expected future benefits from the company; it is forward-looking.

The net assets per share, or book value, is calculated by dividing the company's net assets by the number of shares. This figure means how much of the company's net assets at cost belong to each share. As opposed to the market price, this figure is past-looking, since it is based on the information from the balance sheet, where only past transactions are recorded. Moreover, this figure is subject to all accounting concepts, methods and policies. For example, if a company does not revalue its fixed assets, the book value of its shares will be lower than the fair value, since the assets are more expensive in reality. Also, the book value of shares does not take into account the information about internally generated intangible assets, since they are not reported in the balance sheet. But in fact these intangible assets may bring significant benefits to the company.

So, these two figures contain completely different information about the company, and there is no reason why they should be equal. Since the company's market price is lower than its net assets value, the future prospects of the company are not good, as seen by its shareholders. In other words, the shareholders expect fewer benefits from owing the shares than the value of the company's net assets as per balance sheet. We can say that the company has negative goodwill; it operates the assets inefficiently.

But the low market price may also be a result of a temporary undervaluation of the company. So, in order to make the final conclusion, the market price should be compared with the fair price, not with the book value.

? Question 11

Ann wants to sell her business. Distributable cash flow for the year just ended was £35,000 and is expected to grow each year by 4%. Businesses of this type tend to earn a return on investment of 20% per year. Use the perpetuity model to value Ann's business as a going concern. Explain why the value you have calculated is different from the current value of the tangible net assets of £135,000.

☺ Answer

The value of a business can be calculated as the present value of all net cash flows which this business is expected to generate. We assume that the cash flow for the year just ended has already been distributed among the owners. Then, the present value of the future cash flows is

$$PV = \frac{35{,}000 * (1+0.04)}{1+0.2} + \frac{35{,}000 * (1+0.04)^2}{(1+0.2)^2} + \frac{35{,}000 * (1+0.04)^3}{(1+0.2)^3} + \ldots$$

This infinitely decreasing progression has a finite sum, which is knows as the "Gordon growth model":

$$P = \frac{CF_0(1+g)}{1+r} + \frac{CF_0(1+g)^2}{(1+r)^2} + \frac{CF_0(1+g)^3}{(1+r)^3} + \ldots = \frac{CF_0(1+g)}{r-g},$$

where CF_0 is the previous period cash flow, g is the expected growth rate of the cash flows and r is the discount rate. Using this formula, we obtain the theoretical value of the business:

$$P = \frac{35{,}000 * (1+0.04)}{0.2-0.04} = 227{,}500$$

The business' market value differs from the current value of its tangible net assets because the market value is based on expectations of the future benefits from the business (forward-looking) while the net assets' value is the historical value of separately identifiable assets less liabilities, which is subject to all accounting methods the company applies to them (past-looking).

There are two main reasons why the market value of a business may exceed its balance sheet value (book value). First, the company's assets may be underestimated in the balance sheet since they are reported at cost, while their market price may have risen. Secondly, the company may possess some intangible assets, like good location, customers' loyalty, internally generated brand names, etc., which are not reported in the balance sheet since they do not satisfy the asset recognition criteria, but they generate future benefits and, therefore, increase the market value of the business. Such intangible assets comprise the company's goodwill, which is defined as the excess of the market price of the business over the market value of its identifiable net assets.

Since the company's market value is higher than its book value by £92,500 the company has good future prospects and high goodwill, which is reflected in the expected growth rate of the cash flows.

? Question 12

Your colleague has recently inherited 5,000 shares in Eta Ltd, an unlisted company, and she seeks your advice in valuing them.

The company pays a dividend once each year and 30 pence per share is due to be paid next week to all those currently owning shares. The annual dividend is expected to grow at the rate of 5% per year for the foreseeable future and unlisted companies of this risk class are expected to offer a return of 12% per year.

Required:

Calculate the current (cum div) value per share. What would you expect the value to be after the dividend has been paid? Briefly explain what limitations are there to your calculations.

☺ Answer

The market value of a share is the present value of all expected dividends, including the first one which is going to be paid next week and which should not be discounted:

$$P_{cum\_div} = D_0 + \frac{D_0(1+g)}{1+r} + \frac{D_0(1+g)^2}{(1+r)^2} + ...$$

Using the "Gordon growth model" we obtain:

$$P_{cum\_div} = D_0 + \frac{D_0(1+g)}{r-g} = \frac{D_0(1+r)}{r-g} = \frac{0.3*(1+0.12)}{0.12-0.05} = 4.71$$

After the dividend is paid the share price is expected to fall by 30 pence, since its future cash flows will not include this dividend anymore, but the next (first) dividend is still going to be paid in a year and, thus, it should be discounted. Actually the wealth of the shareholders will not change since they will possess less valuable shares but more cash in hand by the same amount.

This model of valuation has several limitations. First, it assumes that dividends will grow at a constant predetermined rate, which is not a matter of fact. Secondly, the discount rate is uncertain, especially for a non-listed company. Moreover, the discount rate might change over time due to changes in the company's risk, in the opportunity cost of money, inflation, etc.

Chapter 6. Analysis of Financial Performance

? Question 1

Extracts of the most recent profit and loss account and balance sheet of Theta Limited appear below:

	$
Profit and Loss Account	
Operating profit	425,000
Interest paid	75,000
Profit before taxation	350,000
Taxation	125,000
Profit after taxation	225,000
Dividends	150,000
Retained profits for the year	75,000
Balance sheet	
Total assets less current liabilities	2,000,000
10% debentures 2009	750,000
Net assets	1,250,000
Ordinary share capital	750,000
Retained profits	500,000
	1,250,000

Required:

a) Calculate the following ratios:

(i) Return on capital employed.

(ii) Return on equity (or Shareholders' funds).

(iii) Gearing.

b) Explain briefly how each of these three ratios might be used by a potential shareholder as part of an evaluation of the company.

☺ Answer

a) (i) *Return on capital employed (ROCE) = Profit before interest and tax / Capital employed.*

'Profit before interest and tax' is also called 'Operating profit'. Capital employed consists of share capital, reserves and long-term liabilities and it is equal to total assets less current liabilities according to the accounting equation. Therefore,

ROCE = $425,000 / $2,000,000 ≈ 0.21.

(ii) *Return on equity (ROE) = Profit after tax / Equity*. Equity consists of share capital and reserves, and it is equal to net assets according to the accounting equation. Therefore,

ROE = $225,000 / $1,250,000 = 0.18.

(iii) We will use the following formula for gearing: *Gearing = Long-term liabilities / Equity*.

Gearing = $750,000 / $1,250,000 = 0.6.

b) ROCE and ROE are profitability ratios. ROCE shows, how much profit a company generates on each dollar invested into it by its shareholders and long-term creditors. For example, this company has generated 21 cent for each dollar invested into its capital employed during this year.

ROE shows how much profit a company generates on each dollar invested into its share capital. So, it shows a company's profitability for shareholders. It shows how efficiently a company uses its net assets to generate profit.

All other things being equal, the higher are ROCE and ROE, the better is profitability of the company.

Gearing ratio shows the capital structure of a company. It shows to what extent a company is financed by long term borrowing as compared to its own capital. For example, this company relies more on internal financing since its debentures are 60% of its own capital. The higher is gearing, the more risky is the company from the perspective of a shareholder.

Of course, in order to evaluate the company's performance more thoroughly, the above ratios should not be analyzed alone, but be compared to the previous periods' ratios to see trends, and to the industry average ratios to see whether the company has performed better than similar companies in the industry.

? Question 2

Extracts from the most recent profit and loss account and balance sheet of Iota Ltd are given below:

	2004	2003
	$	$
Sales	425,000	368,000
Cost of sales	342,000	302,000
Gross profit	83,000	66,000
Stock	61,000	58,000
Trade debtors	85,000	60,000
Trade creditors	65,000	52,000

Required:

a) Calculate the following ratios:

(i) Gross margin,

(ii) Stock holding period,

(iii) Debtors collection period,

(iv) Trade credit period.

b) Explain briefly how each of these four ratios might be used by potential shareholders as a part of an evaluation of the company.

☺ Answer

a) (i) *Gross profit margin = Gross profit / Sales.*

Gross profit margin_{2003} = \$66,000 / \$368,000 ≈ 0.18.

Gross profit margin_{2004} = \$83,000 / \$425,000 ≈ 0.195.

(ii) *Stock holding period = (Average stock / Cost of sales) x 365 days.*

Average stock is the average value of goods a company has in its stock every day during an accounting period. Since we are only given the values of the closing stock for the two years, we will assume that these values are representative.

Stock $\text{holding period}_{2003}$ = (\$58,000 / \$302,000) x 365 days ≈ 70 days.

Stock $\text{holding period}_{2004}$ = (\$61,000 / \$342,000) x 365 days ≈ 65 days.

(iii) *Debtors collection period = (Average debtors / Sales on credit) x 365 days.*

We will again assume that the closing debtors figure is representative and that all sales are made on credit terms.

Debtors $\text{collection period}_{2003}$ = (\$60,000 / \$368,000) x 365 days ≈ 59.5 days.

Debtors $\text{collection period}_{2004}$ = (\$85,000 / \$425,000) x 365 days = 73 days.

(iv) *Trade credit period = (Average creditors / Purchases on credit) x 365 days.*

We will again assume that the closing creditors figure is representative and that all purchases are made on credit terms. Since we are not given the amount of purchases, we will approximate it by the cost of sales, assuming that the opening stock is equal to the closing stock.

Trade $\text{credit period}_{2003}$ = (\$52,000 / \$302,000) x 365 days ≈ 63 days.

Trade $\text{credit period}_{2004}$ = (\$65,000 / \$342,000) x 365 days ≈ 69 days.

b) Gross profit margin is a profitability ratio, it shows how much gross profit the business makes on each dollar of its sales. Gross profit margin of 0.18 means that the company's gross profit is about 18% of its sales, while its cost of sales is about 82% of its sales. Since the gross profit margin increased from 2003 to 2004, the company became more profitable. But we cannot judge, whether the figures are high or low, since we do not know the average gross margins in this industry.

Stock holding period, debtors' collection period and trade credit period are efficiency ratios. They show how efficiently the company uses its net current assets (working capital). The higher the ratios are, the faster the company turns over the corresponding current asset or current liability.

Stock holding period shows how long the company keeps goods in stock on average before it sells them. The decrease in the stock holding period means that the company is selling its goods faster, and thus, it is operating more efficiently than in the previous year.

Debtors' collection period shows how long it takes for debtors of the company to pay back their obligations. The increase in the debtors' collection period may mean that the company's debtors delay in paying, or that the company is offering longer credit to its customers. Very high ratio is not good for the company, since it might have temporary liquidity problems.

Trade credit period shows how many days the company needs to repay its liabilities to the suppliers. If the company pays its creditors too quickly it is missing a cheap form of short-term financing. But if the ratio is very high, it means that it takes too much time to repay a debt for the company what could be a result of the company's liquidity problems. Also it is not good for the company if its trade credit period is shorter than its debtors' collection period (that happened in 2004), since the company pays to the creditors sooner than it receives cash from its debtors, and it might face liquidity problems.

Anyway, to make the final conclusion about the efficiency of the working capital management, all the ratios should be compared to some benchmark, e.g. the industry average ratios.

? Question 3

The following information relates to two companies in the same industry the financial year of which ends on the same day:

	Kappa Plc	Lambda Plc
Profit before, interest and tax	£700,000	£700,000
Operating profit margin	1%	15%
Return on capital employed	14%	?
Asset turnover ratio	?	0.8

Required:

Calculate the asset turnover ratio for Kappa Plc and the return on capital employed for Lambda Plc. Provide possible reasons for the differences in the three ratios for the two companies.

☺ Answer

Operating profit margin = Profit before interest and tax / Sales.

Return on capital employed (ROCE) = Profit before interest and tax / Total assets less Current liabilities.

Asset turnover ratio = Sales / Total assets less Current liabilities.

Therefore,

Asset turnover ratio (Kappa Plc) = ROCE / Operating profit margin = 0.14/0.01 = 14.

ROCE (Lambda Plc) = Operating profit margin x Asset turnover ratio = 0.15 x 0.8 = 0.12 = 12%.

Operating profit margin for Lambda Plc is significantly higher than for Kappa Plc due to lower costs and higher efficiency of production. Asset turnover is, on the contrary, higher for Kappa Plc. It means that Kappa Plc uses its net assets more efficiently (faster) in generating sales. ROCE is quite similar for the both companies. Since ROCE is the product of the other two ratios, we can see where is a weak point of each company. For example, Kappa Plc has very high costs in comparison to Lambda Plc, but this is counterbalanced by much faster turnover of its net assets. The opposite is true for Lambda Plc.

? Question 4

The draft accounts and a schedule of ratios, including the following, for 2000 have been presented to the directors of Mu Plc:

gross profit margin,

asset turnover ratio,

current ratio,

quick ratio,

gearing ratio,

stock turnover ratio.

It has since been discovered that an item of closing stock was omitted in error, so, the ratios will have to be corrected.

Required:

Give the formula for each of the above ratios and indicate whether it will be higher, lower or unchanged after the corrections.

☺ Answer

After the corrections the closing stock figure will rise.

Gross profit margin = Gross profit / Sales. A rise in the closing stock will reduce cost of sales and increase gross profit. Therefore, gross profit margin will increase.

Asset turnover ratio = Sales / Total assets less Current liabilities. A rise in the closing stock will increase current assets and, thus, total assets. Therefore, asset turnover ratio will fall.

Current ratio = Current assets / Current liabilities. Current ratio will increase because of the increase in current assets.

Quick ratio = (Current assets – Stock) / Current liabilities. Since the stock is not counted in calculation of the quick ratio, its increase will not affect the quick ratio.

Gearing ratio = Long-term liabilities / Equity. A rise in the closing stock will reduce cost of sales and increase net profit. As profit is added to equity, equity will rise, and gearing ratio will fall.

Stock turnover ratio = Cost of sales / Stock. A rise in the closing stock will reduce cost of sales. So, stock turnover ratio will fall due to both lower nominator and higher denominator.

? Question 5

Jason was told by a friend that Nu Plc might have a bright future. So he is considering to buy shares of the company. He has provided you with the following summarised information taken from the company's most recent annual accounts:

	£'000
Profit and loss account	
Sales	6,510
Cost of sales	4,560
Net profit after tax	825
Dividend	200
Balance sheet	
Fixed assets	2,300
Stock	320
Trade debtors	360
Cash at bank	180
Trade creditors	1,000
Share capital (£1 shares)	2,000
Profit and loss account	160

The share price of Nu Plc is currently 260 pence and has been around this level for the past few months.

The trade association to which Nu Plc belongs compiles statistics taken from the annual accounts of its members and from other sources. You have obtained the following recently prepared data which give the industry average for seven statistics as:

Gross profit margin	48%
Current ratio	2.2
Quick (liquid) ratio	1.44
Debtors collection period (days)	32
Stock holding period (days)	38
Trade credit period (days)	50
Price/earnings ratio	10

Required:

a) Calculate the above seven statistics for Nu Plc giving in each case the formula. Use the statistics to comment on the company's recent performance. Any assumptions must be stated.

b) What further information would you advise Jason to seek before deciding whether to buy shares of Nu Plc? Explain why this information is needed.

☺ Answer

a) *Gross profit margin = Gross profit / Sales* = (6,510 – 4,560)/6,510 ≈ 0.3 = 30%.

Gross profit margin of the company is significantly lower than in the industry, and that is a bad sign. It means that the company has higher cost of sales and lower profitability than its competitors. This may result in lower profit available for appropriation as dividends.

Current ratio = Current assets / Current liabilities = (320 + 360 + 180)/1,000 = 0.86.

The liquidity position of the company is not promising as well. Its current assets do not even cover its current liabilities, while it is normal to have them two times higher. This means that the company may need to borrow money to repay its creditors, and this will leave little opportunities to pay out dividends in the nearest future.

Quick ratio = (Current assets – Stock) / Current liabilities = (360 + 180)/1,000 = 0.54.

Quick ratio means that the company is able to cover only approximately a half of its creditors by the most liquid assets. This is significantly lower than in the industry and is a sign of very high liquidity risk of the company.

Debtors collection period = (Average debtors / Sales) x 365 days = (360/6,510) x 365 ≈ 18 days.

Here we assume that the closing debtors figure is representative for the year and that all sales were made on credit. We see that the company collects debts faster than other companies in the industry, allowing shorter credit period to its customers. This may be a result of low liquidity of the company.

Stock holding period = (Average stock / Cost of sales) x 365 days = (320/4,560) x 365 ≈ 26 days.

Here we also assume that the closing stock figure equals the average stock held during the year. The company sells its stock faster than its competitors, what means that it operates more efficiently. It

may also mean that the company is small and growing, and it does not have much space in the warehouse, so, its stock turnover is very high. But this is good since the company has lower storage costs.

Trade credit period = (Average creditors / Purchases on credit) x 365 days =

= (1,000/4,560) x 365 ≈ 80 days.

Here we again assume that the closing creditors figure is representative for the year, that all purchases were made on credit and that opening and closing stock were equal so that purchases can be approximated by cost of sales. The company repays its debts to its creditors much longer than it is common in industry. This can again be a sign of bad liquidity position. But since the company is allowed such a long credit period, the creditors trust it. Probably the company is growing and is actively using such a source for additional financing.

P/E = Market price / EPS = Market price / (Profit after tax / Number of shares) =

= 2.6/(825/2,000) = 6.3.

The higher is the P/E ratio, the higher is the price for the given EPS and the better are the prospects of the company as seen by the shareholders, because this overvaluation captures the future expected benefits from the company's shares. This ratio is lower than the average in the industry, what means that the shareholders expect poorer performance of this company in future. This may be a result of the bad liquidity position and the low profit margins.

b) Jason should seek for the information which would either confirm or reject our above propositions.

First, the full profit and loss account is required for several consecutive years to analyse profitability of the company. The company has lower gross profit margin, but it might have higher net profit margin due to lower other expenses. But net profit margin is a better signal of the company's ability to pay dividends. Also if the margins are improving over time, this is a good trend. Besides profitability, we are interested in the dividend policy of the company during the current and previous years: is the company paying constant or increasing dividends or has it cut dividends for some reason?

Secondly, the full balance sheets for several years are required. We would like to see the trends in the company's liquidity position. Probably, the company is expanding and acquiring new fixed assets. Also the capital structure of the company is important: does it have high gearing and, therefore, high risk of insolvency?

Third, cash flow statements would give us more information why the company is experiencing problems with liquidity.

Finally, some information about the company's future projects is desirable. We would be interested in the company's budgets and any qualitative information about the company, which could be found

in the press, for example. Is the company indeed expanding? In such a case its problems may be temporary and it is worth buying its shares in order to earn high return in the long run.

? Question 6

What use is the figure for net cash flow from operating activities when assessing the financial performance of a company? Give four reasons why the net cash flow from operating activities might be different from the company's operating profit (i.e. its net profit before interest and tax).

☺ Answer

Net cash flow from operating activities shows how much cash a company has generated performing its main activity, e.g. production or trading. Since usually the operating activity of a company is its main source of cash, it is very important to analyse it. If it is low, it is important to understand why, because it may signal that the company is not performing well. If it is negative, the company will need to borrow, but how long can this last?

A company's cash flow from operating activities is normally different from its operating profit since they are calculated on different bases: cash versus accruals. For example, non-cash expenses such as depreciation, loss on disposal and increase in bad debt provision reduce profit but do not involve cash outflows. Therefore, profit should be lower.

Also if the company sells some goods on credit, these goods are added to sales and, thus, profit rises, but there is no corresponding cash inflow. On the other hand, if the company purchases some goods on credit, it does not pay cash for them and the net cash flow will be higher than profit.

Finally, if the company purchased more stock which has not been sold, it does not affect profit, since sales are matched to cost of sales rather than purchases, but it involves cash outflows.

Due to the above reasons we need to adjust for non-cash revenues and expenses and changes in net current assets when making reconciliation of operating profit to net cash flow from operating activities.

? Question 7

At the directors' meeting of Omicron Plc at which the draft accounts for the year ended 30 September 2002 were discussed, the production director made the following comment:

"I can see from the cash flow statement that we have serious cash problems. I think I can help out. I can see that depreciation is added when calculating the figure for cash from operating activities, so, I am going to use the fixed assets more intensively. It will increase the depreciation, thereby boosting the figure for cash from operating activities."

Required:

Provide an evaluation of the production director's understanding of depreciation, of his suggested action and its effect upon the company's cash position.

☺ Answer

The production director is obviously mistaken for two reasons. First, he does not understand the concept of depreciation. Depreciation in accounting is an allocation of an asset's cost over its useful life to satisfy the matching concept. Since the useful life and, therefore, the depreciation rate are determined when the assets is bought, the depreciation expense will not change even if the asset is used more intensively. Otherwise, the consistency concept will be violated.

Second, even if the depreciation charge increased, it would not have any impact on the company's liquidity position. Depreciation is just an accounting entry, which has no underlying cash flows. Depreciation is added when calculating the figure for cash from operating activities not because it creates a cash inflow, but because it has already been subtracted to calculate operating profit, and now it is added back to reconcile the profit figure to net cash flow figure. If depreciation is increased profit becomes lower, but then this higher depreciation is added back to calculate the net cash flow, which does not depend on depreciation.

Therefore, if the production director uses the fixed assets more intensively, this action will have no positive impact on the net cash flow from operating activities. On the contrary, it might even lead to additional cash outflows in future if the asset needs to be replaced earlier or if the maintenance costs increase.

Chapter 7. Alternative Methods of Accounting

? Question 1

"During the last year, general price inflation in the economy was 2% and the replacement cost of our factory machinery increased by 30%. Would it be sensible to account for such changes in the annual accounts?"

Required:

Explain what the effect on company profit and return on shareholders' equity might be if such adjustments were made. Would such general and specific inflation adjustments merely serve to confuse rather than inform users of accounts?

☺ Answer

Accounting for the 2% inflation does not make much sense because the figures would not change significantly and hence would not become more relevant, but their reliability would be lost and such adjustments could indeed confuse users of accounting information. If such general inflation adjustments were made, all figures would be revalued in accordance with the inflation rate using the Current Purchasing Power method, the company's profit would decrease and the return of shareholders equity (ROE = PAT/Equity) would also fall due to lower profit after tax and higher equity.

The 30% increase in the value of machinery is a significant change and the accounts would become more relevant after taking this into account (applying Current Replacement Cost method). Such specific inflation adjustment would involve an increase in the value of machinery and a creation of a revaluation reserve in equity. Since no other accounts are affected, this is likely not to confuse but rather inform. Profit would fall due to higher depreciation expense and ROE would also fall. But violation of the cost concept for only one particular asset needs to be justified.

? Question 2

In periods of significant inflation, accounts prepared using historical cost accounting may be less useful than in periods of low, or zero, inflation. Explain why this is so using the example of a company with slow-moving stock to illustrate your answer.

☺ Answer

Under historical cost convention, stock is reported at its acquisition cost no matter what its current market price is. When inflation is high and stock is kept by the company for a long time, this figure becomes irrelevant. The value of stock on the balance sheet is significantly underestimated. Hence,

the company will seem to have less liquid assets than it really has. Also, gross profit is overestimated and includes holding gain which arises solely from that fact that the company has kept this stock for some time while its price has risen. This issue is particularly important if the company uses FIFO method if stock valuation. Higher profit may mistakenly be considered as a signal of good performance and may be distributed as dividends. But then the company may fail to maintain its capital in real terms in order to be able to operate at the same capacity but at higher prices. Therefore, accounts prepared under historical cost convention are less useful and may lead to wrong decisions in inflationary environment.

? Question 3

Alf started a business selling stone statues of Emperor Napoleon on 1 April 2004 with £100,000 in cash. His transactions in the first year (all for cash) were as follows:

		£
1 April 2004	Purchased 300 statues	60,000
	Purchased freehold market stall	25,000
31 March 2005	Sold 200 statues	80,000
	Purchased 200 statues	50,000
	Paid annual overheads	15,000

Alf's accountant has prepared the following profit and loss account for the first year of business:

	£	£
Sales		80,000
Cost of goods sold		
Purchases	110,000	
less: Closing stock	70,000	40,000
Gross profit		40,000
Less annual overheads		15,000
Net profit for the year		25,000

No depreciation is charged on the freehold market stall, but Alf notes that a replacement stall would cost 10% more on 31 March 2005. Although the general price level in the economy rose 5% during the year, Alf believes that he can withdraw an income of £25,000 from the business and still maintain the capital of the business at its original level.

Required:

a) Clearly explain, using calculations to support your answer, the maximum amount Alf can withdraw from the business as income if he wants to ensure:

(i) Maintenance of financial capital in money terms.

(ii) Maintenance of financial capital in real terms.

(iii) Maintenance of operating capability.

b) Why is the maintenance of capital seen to be important when discussing the financial results of a company?

c) Provide an explanation for why corporate financial accounts are generally prepared on a historic cost rather than a current replacement cost (CRC) or current purchasing power (CPP) basis. In your answer identify any theoretical or practical problems an accountant faces when adjusting historic cost figures to either CRC or CPP values.

☺ Answer

a) (i) To maintain financial capital in money terms Alf needs to have at least the same monetary value of capital at the end of the year as he had at the beginning of the year (£100,000). Since net profit is added to capital, Alf can withdraw the whole net profit calculated under Historical Cost Accounting (£25,000) to keep capital unaffected. To see this let us prepare Alf's balance sheet at the end of the year *after* withdrawals.

Balance Sheet as at 31 March 2005 (HCA)

	£	£
Fixed assets		
Freehold market stall	25,000	
Current assets		
Stock	70,000*	
Cash	5,000**	
		100,000
Financed by:		
Capital	100,000	
Net profit for the year	25,000	
Less: Drawings	(25,000)	100,000

Workings:

**60,000*1/3+50,000=70,000*

***100,000-60,000-25,000+80,000-50,000-15,000-25,000=5,000*

(ii) To maintain financial capital in real terms Alf needs to have capital at the end of the year with the same purchasing power as he had at the beginning of the year. The nominal value of such capital is £105,000 (=£100,000*1.05). Hence, Alf needs to keep £105,000 in capital of his business. To calculate how much he can withdraw, we need to prepare his financial statements using the Current Purchasing Power method. We need to revalue all transactions which happened on 1 April 2004 by the general inflation rate.

Profit and loss account for the year ended 31 March 2005 (CPP)

	£	£
Sales		80,000
Cost of goods sold		
Purchases (60,000*1.05+50,000)	113,000	
less: Closing stock (60,000*1.05*1/3+50,000)	71,000	42,000
Gross profit		38,000
Less annual overheads		15,000
Net profit for the year		23,000

The net profit under CPP method is only £23,000 because the cost of goods sold was revalued upwards. But the amount Alf can withdraw is even lower because of the loss on monetary items (foregone interest on unspent cash at the beginning of the year).

Balance Sheet as at 31 March 2005 (CPP)

	£	£
Fixed assets		
Freehold market stall (25,000*1.05)	26,250	
Current assets		
Stock (60,000*1.05*1/3+50,000)	71,000	
Cash	7,750*	
		105,000
Financed by:		
Capital (100,000*1.05)	105,000	
Net profit for the year	23,000	
Less: Loss on monetary items	(750)**	
Less: Drawings	(22,250)	105,000

Workings:

**100,000-60,000-25,000+80,000-50,000-15,000-22,250=7,750*

*** (100,000-60,000-25,000)*0.05=750*

So, to keep capital maintained in real terms, Alf can withdraw £22,250.

(iii) To maintain operating capability, Alf should have enough capital to perform the same level of activity at new prices. The replacement cost of the market stall is £27,500 (=£25,000*1.1) and the replacement cost if one statue is £250 (=£50,000/200). The price of the market stall increased by 10% and the price of the statue increased by 25% (from £200 to £250), while the general inflation rate was only 5%. Therefore, Alf needs to keep even more money in business as compared to part (ii) in order to be able to buy the same number of goods at their new prices. To see how much Alf can withdraw, we need to prepare the financial statements using Current Replacement Cost method. We need to revalue all items at their replacement costs.

Profit and loss account for the year ended 31 March 2005 (CRC)

	£	£
Sales		80,000
Cost of goods sold		
Purchases (60,000*1.25+50,000)	125,000	
less: Closing stock (60,000*1.25*1/3+50,000)	75,000	50,000
Gross profit		30,000
Less annual overheads		15,000
Net profit for the year		15,000

The net profit under CRC method is even lower (£15,000) and this is the maximum amount Alf can withdraw to maintain the operating capability.

Balance Sheet as at 31 March 2005 (CRC)

	£	£
Fixed assets		
Freehold market stall (25,000*1.1)	27,500	
Current assets		
Stock (60,000*1.25*1/3+50,000)	75,000	
Cash (30,000-15,000)	15,000	
		117,500
Financed by:		
Capital	100,000	
Net profit for the year	15,000	
Realised gain	10,000*	
Unrealised gain	5,000**	
Revaluation of market stall (£25,000*0.1)	2,500	
Less: Drawings	(15,000)	117,500

Workings:

**200 statues sold (£250-£200) = £10,000*

***100 statues bought on 1 Apr. (£250-£200) = £5,000*

We can see from the balance sheet that Alf needs to keep £117,500 in capital to ensure that he has enough funds to maintain the same level of operating activity. All capital reserves (realised gain, unrealised gain, revaluation reserve) cannot be withdrawn, otherwise capital will not be maintained.

b) Maintenance of capital means that a company has at least the same level of capital at the end of the year as it had at the beginning of the year. Capital needs to be maintained in order for the company to be able to perform at least the same level of activity. When evaluating the financial results of a company, it is not enough simply to look at the nominal value of net profit, as its real value may be significantly lower in the presence of high inflation. In such a case withdrawing the whole nominal net profit would lead to the same level of capital in nominal terms, but its purchasing power will be lower and the level of activity will have to be reduced next year. Therefore, it is important to calculate the real net profit, which takes into account the effect of

inflation. The real net profit shows the actual financial performance of a business and ensures maintenance of capital if it is withdrawn (or paid out as dividends).

c) Historical cost accounting is the generally accepted method because it ensures the greatest reliability of figures and comparability across companies. Historical figures are supported by primary documents; they are objective and free from personal judgement. Alternative methods of accounting (CPP or CRC methods) require identification of relevant inflation rates and hence are more subjective. CPP method uses a single inflation rate, which may not be a good approximator if the business is not well diversified. CRC method uses different replacement costs for different items and hence it is more complicated and time-consuming. Moreover, replacement costs for some assets may not even exist if such assets are not traded in the market. Although these alternative methods of accounting are meant to provide more relevant information, they require a lot of personal judgement and are less transparent. Therefore, historical cost accounting is generally preferred in environments of low inflation.