P7 – Financial Accounting and Tax Principles

MANAGERIAL LEVEL

FINANCIAL MANAGEMENT PILLAR

PAPER P7 – FINANCIAL ACCOUNTING AND TAX PRINCIPLES

This is a Pilot Paper and is intended only to be an indicative guide for tutors and students of the style and type of questions that are likely to appear in future examinations. It does not seek to cover the full range of the syllabus learning outcomes for this subject.

Financial Accounting and Tax Principles will be a three hour paper with two compulsory sections (50 marks and 30 marks respectively) and one section with a choice of questions for 20 marks.

CONTENTS

SECTION A – 50 MARKS

ANSWER *ALL* TWENTY-ONE SUB-QUESTIONS

REQUIRED:

On the indicative ANSWER SHEET, either write your answer in the space provided where the sub-question requires a written response, or place a circle "O" around the letter that gives the correct answer to the sub-question where a list of distractors has been provided.

If you wish to change your mind about an answer to such a sub-question, block out your first answer completely and then circle another letter. You will not receive marks if more than one letter is circled.

Space has been provided on the four-page answer sheet for workings. If you require further space, please use the last page of your answer book and clearly indicate which question(s) these workings refer to.

You must detach the answer sheet from the question paper and attach it to the front cover of your answer book before you hand it to the invigilators at the end of the examination.

Question One

1.1 Which ONE of the following transactions is most likely to affect the overall amount of working capital?

A Receipt of full amount of cash from a customer to settle their trade receivable account.

B Payment of a trade payable account in full.

C Sale of a non-current asset on credit at its net book value.

D Purchase of inventory on credit.

(2 marks)

Financial Accounting and Tax Principles

Write here your full examination number:				
Centre Code				
Hall Code				
Desk Number				

INDICATIVE ANSWER SHEET FOR SECTION A

1.1	**A**	**B**	**C**	**D**
1.2	**A**	**B**	**C**	**D**
1.3	**A**	**B**	**C**	**D**
1.4	**No more than 15 additional words:** A direct tax is one that			
1.5	The optimal amount to the nearest $100 to be transferred is:			
1.6	*1*			
Maximum 5 words per item	*2*			
	3			
	4			
1.7	The annual rate of interest is: %			
1.8	**A**	**B**	**C**	**D**
1.9	The average working capital cycle is:			
1.10	**A**	**B**	**C**	**D**
1.11	**A**	**B**	**C**	**D**
1.12	**A**	**B**	**C**	**D**
1.13	Cash expected to be received is: $			
1.14	**A**	**B**	**C**	**D**
1.15	Tax due is: $			
1.16	**A**	**B**	**C**	**D**

THIS ANSWER SHEET CONTINUES ON PAGE 4

1.17	**In no more than 30 words:**			
1.18	**In no more than 30 words:**			
1.19	The value of goodwill to be included in the accounts is: $			
1.20	The optimal order size is:			
1.21	**A**	**B**	**C**	**D**

You must detach this Answer sheet from the question paper and attach it to the inside front cover of your answer book before you hand it in to the invigilators at the end of the examination.

Space for workings for Section A

Space for workings for Section A

1.2 B entered into a three-year contract to build a leisure centre for an enterprise. The contract value was $6 million. B recognises profit on the basis of certified work completed.

At the end of the first year, the following figures were extracted from B's accounting records:

	$000
Certified value of work completed (progress payments billed)	2,000
Cost of work certified as complete	1,650
Cost of work-in-progress (not included in completed work)	550
Estimated cost of remaining work required to complete the contract	2,750
Progress payments received from enterprise	1,600
Cash paid to suppliers for work on the contract	1,300

What values should B record for this contract as "gross amounts due from customers" and "current liabilities – trade and other payables"?

	Gross amounts due from customers	*Current liabilities – trade and other payables*
A	$950,000	$350,000
B	$950,000	$900,000
C	$1,250,000	$600,000
D	$2,550,000	$900,000

(2 marks)

1.3 IAS 8 – *Net Profit or Loss for the Period, Fundamental Errors and Changes in accounting policies* specifies the definition and treatment of a number of different items.

Which of the following is NOT specified by IAS 8?

A The effect of a change in an accounting estimate.

B Prior period adjustments.

C Provisions.

D Extraordinary items.

(2 marks)

1.4 In no more than 15 words, complete the following sentence:

"A direct tax is one that…"

(Write your answer in the space provided on the answer sheet)

(2 marks)

1.5 A company uses the Baumol cash management model. Cash disbursements are constant at $20,000 each month. Money on deposit earns 5% a year, while money in the current account earns a zero return. Switching costs (that is, for each purchase or sale of securities) are $30 for each transaction.

What is the optimal amount (to the nearest $100) to be transferred in each transaction?

(Write your answer in the space provided on the answer sheet)

(2 marks)

1.6 List (using no more than five words per item) the four main sources of tax rules in a country.

(Write your answer in the space provided on the answer sheet)

(4 marks)

1.7 WM's major supplier, INT, supplies electrical tools and is one of the largest companies in the industry, with international operations. Deliveries from INT are currently made monthly, and are constant throughout the year. Delivery and invoicing both occur in the last week of each month.

Details of the credit terms offered by INT are as follows:

Normal credit period	*Cash discount*	*Average monthly purchases*
40 days	2% for settlement in 10 days	$100,000

WM always takes advantage of the cash discount from INT.

Calculate the annual rate of interest (to two decimal places) implied in the cash discount offered by INT. Assume a 365-day year.

(Write your answer in the space provided on the answer sheet)

(3 marks)

1.8 A company has a current ratio of 2 :1. Due to having significant surplus cash balances, it has decided to pay its trade payable accounts after 30 days in future, rather than after 50 days, as it has in the past.

What will be the effect of this change on the company's current ratio and its cash operating cycle?

	Current ratio	*Cash operating cycle*
A	Increase	Increase
B	Increase	Decrease
C	Decrease	Increase
D	Decrease	Decrease

(2 marks)

1.9 The following balances were extracted from the books of A:

	Year ended 31 March 2003
	$000
Revenue	300
Cost of sales	200
Gross profit	100

	At 31 March 2003
	$000
Closing inventory	15
Trade receivables	36
Trade payables	28

Assume all revenue is credit sales and cost of sales equates to inventory purchases. What is A's average working capital cycle for the year ended 31 March 2003?

(Write your answer in the space provided on the answer sheet)

(3 marks)

1.10 Double tax relief is used to

A ensure that you do not pay tax twice on any of your income.

B mitigate taxing overseas income twice.

C avoid taxing dividends received from subsidiaries in the same country twice.

D provide relief where a company pays tax at double the normal rate.

(2 marks)

1.11 A withholding tax is:

A tax withheld from payment to the tax authorities.

B tax paid less an amount withheld from payment.

C tax deducted at source before payment of interest or dividends.

D tax paid on increases in value of investment holdings.

(2 marks)

1.12 Tax on an enterprise's trading profits could be referred to as:

(i) Income tax
(ii) Profits tax
(iii) Indirect tax
(iv) Direct tax
(v) Earnings tax

Which TWO of the above would most accurately describe tax on an enterprise's trading profits:

A (i) and (iii)

B (i) and (iv)

C (ii) and (iii)

D (iv) and (v)

(2 marks)

1.13 An enterprise commenced business on 1 April 2002. Revenue in April 2002 was $20,000, but this is expected to increase at 2% a month. Credit sales amount to 60% of total sales. The credit period allowed is one month. Bad debts are expected to be 3% of credit sales, but other customers are expected to pay on time. Cash sales represent the other 40% of revenue.

How much cash is expected to be received in May 2002?

(Write your answer in the space provided on the answer sheet)

(3 marks)

1.14 Which of the following types of taxes is regarded as an indirect tax?

A Taxes on income.

B Taxes on capital gains.

C Taxes on inherited wealth.

D Sales tax (Value added tax).

(2 marks)

1.15 E has an accounting profit before tax of $95,000. The tax rate on trading profits applicable to E for the year is 25%. The accounting profit included non-taxable income from government grants of $15,000 and non-tax allowable expenditure of $10,000 on entertaining expenses.

How much tax is E due to pay for the year?

(Write your answer in the space provided on the answer sheet)

(2 marks)

1.16 Which TWO of the following are underlying assumptions in the International Accounting Standards Board's Framework for the preparation and presentation of financial statements?

(i) Accruals
(ii) Relevance
(iii) Comparability
(iv) Going concern
(v) Reliability

A (i) and (v)

B (ii) and (v)

C (iii) and (iv)

D (i) and (iv)

(2 marks)

1.17 The International Accounting Standards Board's Framework for the preparation and presentation of financial statements defines elements of financial statements. In no more than 30 words define an asset.

(Write your answer in the space provided on the answer sheet)

(2 marks)

The following data is to be used to answer questions 1.18 and 1.19 below

X acquired the business and assets from the owners of an unincorporated business: the purchase price was satisfied by the issue of 10,000 equity shares with a nominal market value of $10 each and $20,000 cash. The market value of X shares at the date of acquisition was $20 each.

The assets acquired were:

- Net tangible non-current assets with a book value of $20,000 and current value of $25,000.
- Patents for a specialised process valued by a specialist valuer at $15,000.
- Brand name, valued by a specialist brand valuer on the basis of a multiple of earnings at $50,000.
- Publishing rights of the first text from an author that the management of X expects to become a best seller. The publishing rights were a gift from the author to the previous owners at no cost. The management of X has estimated the future value of the potential best seller at $100,000. However, there is no reliable evidence available to support the estimate of the management.

1.18 In no more than 30 words, explain the accounting treatment to be used for the publishing rights of the first text.

(Write your answer in the space provided on the answer sheet)

(2 marks)

1.19 Calculate the value of goodwill to be included in the accounts of X for this purchase.

(4 marks)

1.20 SK sells bathroom fittings throughout the country in which it operates. In order to obtain the best price, it has decided to purchase all its annual demand of 10,000 shower units from a single supplier. RR has offered to provide the required number of showers each year under an exclusive long-term contract.

Demand for shower units is at a constant rate all year. The cost to SK of holding one shower unit in Inventory for one year is $4 plus 3% of the purchase price.

RR is located only a few miles from the SK main showroom. It has offered to supply each shower unit at $400 with a transport charge of $200 per delivery. It has guaranteed such a regular and prompt delivery service that SK believes it will not be necessary to hold any safety Inventory (that is buffer Inventory) if it uses RR as its supplier.

Using the economic order quantity model (EOQ model), calculate the optimal order size, assuming that RR is chosen as the sole supplier of shower units for SK.

(Write your answer in the space provided on the answer sheet)

(3 marks)

1.21 Which of the following would be LEAST LIKELY to arise from the introduction of a Just-in-Time stock ordering system?

A Lower stockholding costs.

B Less risk of stock shortages.

C More frequent deliveries.

D Increased dependence on suppliers.

(2 marks)

(Section A = 50 marks)

End of Section A

SECTION B – 30 MARKS

ANSWER *ALL* SIX SHORT-ANSWER QUESTIONS

Question Two

A new type of delivery vehicle, when purchased on 1 April 2000 for $20,000, was expected to have a useful economic life of four years. It now appears that the original estimate of the useful economic life was too short, and the vehicle is now expected to have a useful economic life of six years, from the date of purchase. All delivery vehicles are depreciated using the straight-line method and are assumed to have zero residual value.

Required:

As the trainee management accountant, draft a memo to the transport manager explaining whether it is possible to change the useful economic life of the new delivery vehicle. Using appropriate International Accounting Standards, explain how the accounting transactions relating to the delivery vehicle should be recorded in the income statement for the year ended 31 March 2003 and the balance sheet at that date.

(5 marks)

Question Three

NDL drilled a new oil well, which started production on 1 March 2003. The licence granting permission to drill the new oil well included a clause that requires NDL to "return the land to the state it was in before drilling commenced".

NDL estimates that the oil well will have a 20-year production life. At the end of that time, the oil well will be de-commissioned and work carried out to reinstate the land. The cost of this de-commissioning work is estimated to be $20 million.

Required:

As the trainee management accountant, draft a memo to the production manager explaining how NDL must treat the de-commissioning costs in its financial statements for the year to 31 March 2003. Your memo should refer to appropriate International Accounting Standards.

(5 marks)

Question Four

HRD owns a number of small hotels. The room occupancy rate varies significantly from month to month. There are also high fixed costs. As a result, the cash generated each month has been very difficult to estimate.

Christmas is normally a busy period and large cash surpluses are expected in December. There is, however, a possibility that a rival group of hotels will offer large discounts in December and this could damage December trade for HRD to a significant extent.

January is a poor period for the industry and therefore all the company's hotels will close for the month, resulting in a negative cash flow. The Finance Director has identified the following possible outcomes and their associated probabilities:

	$000	*Probability*
Expected cash balance at 30 November 2003	+175	1·0
Net operating cash flow in December 2003	+700	0·7
	-300	0·3
Net operating cash flow in January 2004	-900	1·0

Assume cash flows arise at month ends.

After January 2004, trade is expected to improve, but there is still a high degree of uncertainty in relation to the cash surpluses or deficits that will be generated in each month.

Required:

Calculate the expected cash balance or overdraft of HRD at 31 January 2004.

Explain why your answer may not be useful for short-term cash planning and outline alternative approaches that could be used.

(5 marks)

Question Five

On 1 January 2003, SPJ had an opening debit balance of $5,000 on its tax account, which represented the balance on the account after settling its tax liability for the previous year. SPJ had a credit balance on its deferred tax account of $1·6 million at the same date.

SPJ has been advised that it should expect to pay $1 million tax on its trading profits for the year ended 31 December 2003 and increase its deferred tax account balance by $150,000.

Required:

Prepare extracts from the income statement for the year ended 31 December 2003, balance sheet at that date and notes to the accounts showing the tax entries required.

(5 marks)

Question Six

IAS 37 defines the meaning of a provision and sets out when a provision should be recognised.

Required:

Using the IAS 37 definition of a provision, explain how a provision meets the International Accounting Standards Board's Framework for the preparation and presentation of financial statements definition of a liability.

(5 marks)

Question Seven

A lessee leases a non-current asset on a non-cancellable lease contract of five years, the details of which are:

- The asset has a useful economic life of five years.
- The rental is $21,000 per annum payable at the end of each year.
- The lessee also has to pay all insurance and maintenance costs.
- The fair value of the asset was $88,300.

The lessee uses the sum of digits method to calculate finance charges on the lease.

Required:

Prepare income statement and balance sheet extracts for years one and two of the lease.

(5 marks)

(Section B = 30 marks)

End of section B

SECTION C – 20 MARKS

ANSWER ONE QUESTION ONLY

Question Eight

AZ is a quoted manufacturing enterprise. Its finished products are stored in a nearby warehouse until ordered by customers. AZ has been re-organising the business to improve performance.

The trial balance for AZ at 31 March 2003 was as follows:

	$000	*$000*
7% Loan Notes (redeemable 2007)		18,250
Accumulated profits at 31 March 2002		14,677
Administrative expenses	16,020	
Bank & Cash	26,250	
Cost of goods manufactured in the year to 31 March 2003 (excluding depreciation)	94,000	
Distribution costs	9,060	
Dividends paid	1,000	
Dividends received		1,200
Equity shares $1 each, fully paid		20,000
Interest paid	639	
Inventory at 31 March 2002	4,852	
Plant & Equipment	30,315	
Provision for Depreciation at 31 March 2002:		
Plant & Equipment		6,060
Vehicles		1,670
Provision for doubtful trade receivables		600
Restructuring costs	121	
Sales revenue		124,900
Share issue expenses	70	
Share premium		500
Trade payables		8,120
Trade receivables	9,930	
Vehicles	3,720	
	195,977	195,977

Additional information provided:

(i) Non-current assets are being depreciated as follows:

Plant & Equipment	20% per annum straight line
Vehicles	25% per annum reducing balance

Depreciation of plant and equipment is considered to be part of cost of sales, while depreciation of vehicles should be included under distribution costs.

(ii) Tax due for the year to 31 March 2003 is estimated at $15,000.

(iii) The closing inventory at 31 March 2003 was $5,180,000.

(iv) A dividend of 5 cents per ordinary share was paid in February 2003.

(v) The 7% loan notes are 10-year loans due for repayment by 31 March 2007. AZ incurred no other interest charges in the year to 31 March 2003.

(vi) The restructuring costs in the trial balance represent the cost of the final phase of a major fundamental restructuring of the enterprise to improve competitiveness and future profitability.

(vii) At 31 March 2003, AZ was engaged in defending a legal action against the enterprise. Legal advisers have indicated that it is reasonably certain that the outcome of the case will be against the enterprise. The amount of compensation is currently estimated at $25,000 and has not been included in the trial balance.

(viii) On 1 October 2002, AZ issued 1,000,000 equity shares at $1·50 each. All money had been received and correctly accounted for by the year end.

Required:

Prepare AZ's income statement for the year to 31 March 2003, a balance sheet at that date, and a statement of changes in equity for the year. These should be in a form suitable for presentation to the shareholders, in accordance with the requirements of International Accounting Standards.

Notes to the financial statements are NOT required, but all workings must be clearly shown. DO NOT prepare a statement of accounting policies or a statement of total recognised gains and losses.

(20 marks)

Question Nine

The following information has been extracted from the draft financial statements of TEX, a manufacturing enterprise:

TEX – Income statement for the year ended 30 September 2003

	$000
Revenue	15,000
Cost of sales	(9,000)
Gross profit	6,000
Other operating expenses	(2,300)
	3,700
Finance cost	(124)
Profit before tax	3,576
Income tax expense	(1,040)
Dividends	(1,100)
	1,436

TEX – Balance sheets at 30 September

	2003		*2002*	
	$000	*$000*	*$000*	*$000*
Assets				
Non-current assets		18,160		14,500
Current assets:				
Inventories	1,600		1,100	
Trade receivables	1,500		800	
Bank	150		1,200	
		3,250		3,100
Total assets		21,410		17,600
Equity and liabilities				
Capital and reserves:				
Issued capital		10,834		7,815
Accumulated profits		5,836		4,400
		16,670		12,215
Non-current liabilities:				
Interest-bearing borrowings	1,700		2,900	
Deferred tax	600		400	
		2,300		3,300
Current liabilities:				
Trade payables	700		800	
Proposed dividend	700		600	
Tax	1,040		685	
		2,440		2,085
		21,410		17,600

Non-current assets

	Property *$000*	*Plant* *$000*	*Total* *$000*
At 30 September 2002			
Cost	8,400	10,800	19,200
Depreciation	1,300	3,400	4,700
Net book value	7,100	7,400	14,500
At 30 September 2003			
Cost	11,200	13,400	24,600
Depreciation	1,540	4,900	6,440
Net book value	9,660	8,500	18,160

(i) Plant disposed of during the year had an original cost of $2,600,000 and accumulated depreciation of $900,000; cash received on disposal was $730,000.

(ii) All additions to non-current assets were purchased for cash.

(iii) Dividends were declared before the balance sheet dates.

Required:

Prepare TEX's cash flow statement and associated notes for the year ended 30 September 2003, in accordance with IAS 7 – *Cash flow statements*.

(20 marks)

(Section C = 20 marks)

End of Question Paper

APPLICABLE MATHS TABLES AND FORMULAE

Present value table

Present value of £1, that is $(1 + r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods	Interest rates (r)									
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods	Interest rates (r)									
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of £1 per annum,

Receivable or Payable at the end of each year for n years $\frac{1-(1+r)^{-n}}{r}$

Periods (n)	Interest rates (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	7.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

FORMULAE

Valuation models

(i) Future value of S, of a sum X, invested for n periods, compounded at r% interest: $S = X[1 + r]^n$

(ii) Present value of £1 payable or receivable in n years, discounted at r% per annum:

$$PV = \frac{1}{[1 + r]^n}$$

(iii) Present value of an annuity of £1 per annum, receivable or payable for n years, commencing in one year, discounted at r% per annum:

$$PV = \frac{1}{r}\left[1 - \frac{1}{[1 + r]^n}\right]$$

(iv) Present value of £1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at r% per annum:

$$PV = \frac{1}{r}$$

(v) Present value of £1 per annum, receivable or payable, commencing in one year, growing in perpetuity at a constant rate of g% per annum, discounted at r% per annum:

$$PV = \frac{1}{r - g}$$

Inventory management

(i) Economic Order Quantity

$$EOQ = \sqrt{\frac{2C_oD}{C_h}}$$

where: C_o = cost of placing an order

C_h = cost of holding one unit in Inventory for one year

D = annual demand

Cash management

(i) Optimal sale of securities, Baumol model:

$$\text{Optimal sale} = \sqrt{\frac{2 \times \text{Annual cash disbursements} \times \text{Cost per sale of securities}}{\text{interest rate}}}$$

(ii) Spread between upper and lower cash balance limits, Miller-Orr model:

$$\text{Spread} = 3\left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}}\right]^{\frac{1}{3}}$$

SOLUTIONS TO PILOT PAPER

SECTION A

Answer to Question One

1.1 The answer is C

1.2

Gross amounts due from customers are calculated as:	*$*
Certified value of work completed	2,000
Less cash received from enterprise	1,600
	400
Plus work in progress	550
	950

Current liabilities – trade and other payables are calculated as:	
Cost of work certified as complete	1,650
Cost of work in progress (not included in completed work)	550
	2,200
Less cash paid to creditors for work on the contract	1,300
	900

The answer is B

1.3 The answer is C

1.4 A direct tax is one that is levied directly on the person who is intended to pay the tax.

1.5

$\sqrt{[(2 \times 30 \times 240{,}000) / 0 \cdot 05]}$ = $16,970 that is approximately **$17,000**

1.6

1 Domestic legislation and court rulings
2 Practice of tax authority
3 Supranational bodies
4 International treaties

1.7 $(100/98)^{365/30} - 1$ = **27·86%**

1.8 The answer is A

1.9

Inventory turnover (15/200) x 365 = 27·4 days
Receivables (36/300) x 365 = 43·8 days
Payables (28/200) x 365 = 51·1 days
Working capital cycle is therefore = (27·4 + 43·8 - 51·1) = **20·1 days**

1.10 The answer is B

1.11 The answer is C

1.12 The answer is D

1.13 (20,000 x 1·02 x 40%) + (20,000 x 60% x 0·97) = **$19,800**

1.14 The answer is D

1.15

Accounting profit	$95,000
Less non-taxable income	$15,000
	$80,000
Add non-tax allowable expenses	$10,000
Taxable profit	$90,000
Tax at 25%	**$22,500**

1.16 The answer is D

1.17 "an asset is a resource controlled by an enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise"

1.18 The publishing rights had no cost as they were a gift, therefore they cannot be recognised. Expected future value cannot be recognised as the event has not yet occurred.

1.19

		$
Tangible non-current assets		25,000
Patents		15,000
Brand name		50,000
		90,000
Purchase consideration:	*$*	
Cash	20,000	
Shares	200,000	
		220,000
Goodwill		**130,000**

1.20

Holding cost = $4 + (3% x $400) = $16

EOQ = $\sqrt{(2C_oD/C_h)}$

= $\sqrt{[(2 \times 10{,}000 \times \$200)/\$16]}$

Optimal order = **500 units**

1.21 The answer is B

Answer to Question Two

Memo

To: Transport Manager

From: Trainee Management Accountant

Date: January 2004

International Accounting Standards (IAS) require the economic life of the vehicle to be changed.

IAS 16 requires the useful economic lives of non-current assets to be regularly reviewed and adjusted if they are found to be incorrect. IAS 16 also requires realistic economic lives to be used for non-current assets. A review of the delivery vehicle indicates that its useful economic life must be adjusted to a more realistic total of six years from date of purchase.

When economic lives are adjusted, IAS 16 requires the net book value to be recovered over the remaining useful economic life of the asset.

The delivery vehicle will have been depreciated for two years, 2000/2001 and 2001/2002.

	$000
Cost	20
Depreciation 2/4	10
Net book value at 31 March 2002	10

The useful economic life is adjusted to six years, two years having elapsed. The remaining useful life is now four years. The net book value, at 31 March 2002, of $10,000 will be depreciated over the remaining four years at $2,500 a year. The effect in the Income Statement for the year to 31 March 2003 will be to charge $2,500 depreciation.

The balance sheet will show cost $20,000, less accumulated depreciation of $10,000 plus $2,500, total $12,500. The net book value at 31 March is $7,500.

Answer to Question Three

Memo

To: Production Manager

From: Trainee Management Accountant

Date: January 2004

International Accounting Standard (IAS) 37 requires that any future obligations arising out of past events should be recognised immediately. The drilling licence includes a clause that requires the land to be returned to the state it was in before drilling commenced. The past event occurs as soon as the licence is granted and the de-commissioning costs are incurred as soon as the oil well has been drilled on the site.

The full obligation must be recognised in the accounts ending 31March 2003. The full cost of the de-commissioning has been estimated ($20 million); this is then discounted to present value and recorded as a provision in the balance sheet at 31 March 2003

Where the expenditure gives access to future economic benefits such as access to oil reserves for the next 20 years, the de-commissioning costs are treated as capital expenditure and added on to the cost of the non-current asset. The new total cost of the oil well would then need to be reviewed to ensure that its book value was not greater than its recoverable amount.

The cost of the oil well (including the provision) should be depreciated each year and charged to the income statement. The provision will remain in the balance sheet until the oil well is de-commissioned in 20 years' time.

Answer to Question Four

	$000	*$000*
Opening balance (1 December 2003)		175
December		
+700 x 0·7	490	
- 300 x 0·3	-90	
		400
January		-900
Closing balance (31 January 2004)		-325

The expected balance at 31 January is an overdraft of $325,000.

The expected balance is based on probabilities and will not occur. It therefore provides a poor basis for short-term cash planning. Based on the probabilities provided, there will either be a cash inflow of $700,000 in December or a cash outflow of $300,000.

The mean expected value would only be relevant if the event could be repeated a significant number of times. The alternative approaches to planning should be to plan for each of the two possible outcomes, +$700,000 or -$300,000.

Answer to Question Five

Notes to the accounts

Note 1: Tax expense

	$
Balance brought forward 1 January 2003	(5,000)
Tax for current year	1,000,000
Deferred tax increase	150,000
Income statement	1,145,000

Note 2: Deferred tax

Deferred tax – balance at 1 January 2003	1,600,000
Increase in year	150,000
Balance at 31 December 2003	1,750,000

Income Statement (extract) for the year ended 31 December 2003

Tax expense (note 1)	$1,145,000

Balance Sheet at 31 December 2003 (extracts)

Current liabilities:

Tax payable	$1,000,000

Non-current liabilities

Deferred tax (note 2)	$1,750,000

Answer to Question Six

The International Accounting Standards Board's Framework for the preparation and presentation of financial statements (the Framework) defines a liability as:

> "a present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow of resources from the enterprise."

IAS 37 defines a provision as a liability of uncertain timing or amount. A provision is only recognised when:

- There is a present obligation (legal or constructive) arising as a result of a past event.
- It is probable (or more likely than not) that an outflow of resources embodying economic benefits will be required to settle the obligation.
- A reliable estimate can be made of the amount of the obligation.

This definition is very similar to the one given in the IASB's Framework for a liability.

> "…a present obligation of the enterprise arising from past events."

A provision is a present obligation arising from a past event. The event must already have happened at the balance sheet date. If the event has not occurred, the entity may be able to avoid it, so a provision will not be made.

The obligation can arise from legal consequences or could be constructive. Constructive obligations arise out of past practice or as a result of promises previously made which have created the expectation that the organisation would honour its promise. Therefore a provision meets this part of the definition of a liability.

> "…the settlement of which is expected to result in an outflow of resources from the enterprise."

Settlement is probably going to result in an outflow of resources. If the outflow of resources is more likely than not to occur it can be expected to happen, thus meeting this part of the definition of a liability.

Answer to Question Seven

		$
Payments under the lease	5 x 21,000	105,000
Fair value		88,300
Finance charge		16,700

Finance charge spread using 5 years' sum of digits

		$
Yr 1	5/15 x 16,700 =	5,567
Yr 2	4/15 x 16,700 =	4,453
Yr 3	3/15 x 16,700 =	3,340
Yr 4	2/15 x 16,700 =	2,227
Yr 5	1/15 x 16,700 =	1,113

	Balance	*Finance charge*	*Repayment*	*Balance*
Yr 1	88,300	5,567	21,000	72,867
Yr 2	72,867	4,453	21,000	56,320
Yr 3	56,320	3,340	21,000	38,660
Yr 4	38,660	2,227	21,000	19,887
Yr 5	19,887	1,113	21,000	0

Income statement (extracts)

Year 1	*$*
Depreciation	17,660
Finance charge	5,567

Year 2	*$*
Depreciation	17,660
Finance charge	4,453

Balance sheet (extracts)	*$*	*$*
	Year 1	*Year 2*
Non-current assets at cost - leased	88,300	88,300
Provision for depreciation	17,660	35,320
Net book value	70,640	52,980
Liabilities – amounts due under leases		
Current liabilities	16,547	17,660
Non-current liabilities	56,320	38,660

Answer to Question Eight

AZ – Income Statement for the year ended 31 March 2003

	$000	*$000*
Revenue		124,900
Cost of sales (W1)		(99,735)
Gross profit		25,165
Distribution costs (W4)	(9,573)	
Administration expenses (W3)	(16,045)	
Other operating expenses	(121)	(25,739)
Loss from operations		(574)
Finance cost (W7)	(1,278)	
Income from other fixed asset investments	1,200	(78)
Loss before tax		(652)
Income tax expense		(15)
Net loss for the period		(667)

AZ – Statement of Changes in Equity for the year ended 31 March 2003

	Share capital	*Share premium*	*Accumulated profits*	*Total equity*
Balance at 31 March 2002	19,000	0	14,677	33,677
Issue of shares	1,000	500		1,500
Share issue costs		(70)		(70)
Net loss for the period			(667)	(667)
Dividends (W6)			(1,000)	(1,000)
Balance at 31 March 2003	20,000	430	13,010	33,440

AZ – Balance Sheet at 31 March 2003

Non-current Assets	*$000 Cost*	*$000 Depreciation*	*$000 Net Book Value*
Property, plant and equipment (W9)	34,035	14,306	19,729
Current Assets			
Inventory		5,180	
Trade receivables (W8)		9,330	
Cash at bank & in hand		26,250	
			40,760
			60,489
Capital and Reserves			
Called up share capital		20,000	
Share premium account		430	
Accumulated profits		13,010	
			33,440

Non-current liabilities			
7% Loan notes (redeemable 2007)		18,250	
Other provisions		25	
			18,275
			51,715
Current liabilities			
Trade payables		8,120	
Tax		15	
Accruals (W7)		639	8,774
			60,489

Workings

W1 Cost of sales:

Opening inventory	4,852	
Cost of goods manufactured in year	94,000	
	98,852	
Less closing inventory	(5,180)	
	93,672	
Add depreciation – plant and equipment (W2)	6,063	
	99,735	

W2 Depreciation

Plant and equipment, cost	30,315	
Depreciation for year @ 20%	6,063	(IS)
Depreciation b/f	6,060	
Depreciation c/f	12,123	(BS)

W3 Administration expenses

Per trial balance	16,020
Provision for legal claim	25
	16,045

W4 Distribution expenses

Per trial balance	9,060
Depreciation vehicles (W5)	513
	9,573

W5 Depreciation

Vehicles, cost	3,720	
Depreciation b/f	1,670	
	2,050	
Depreciation for year @ 25%	513	(IS)
Depreciation b/f	1,670	
Depreciation c/f	2,183	(B/S)

W6 Dividends

Dividends paid		
Ordinary dividend 0·05 x 20 million shares =	1,000	(SCE)

W7 Finance cost

7% interest on Loan notes	1,278	(IS)
Paid	639	
Accrued interest	639	(B/S)

W8 Trade receivables	9,930
Provision for doubtful trade receivables	600
Trade receivables – Balance sheet	9,330

W9 Non-current assets

	Cost		*Depreciation*	
	Plant	*Vehicles*	*Plant (W2)*	*Vehicles (W5)*
Balance b/f	30,315	3,720	6,060	1,670
Depreciation			6,063	513
Balance c/f	30,315	3,720	12,123	2,183
Totals	34,035		14,306	

Answer to Question Nine

TEX – Cash Flow Statement for the year ended 30 September 2003

	$000	*$000*
Cash inflow from operating activities		
Cash receipts from customers (W1)	14,300	
Cash paid to suppliers and employees (W2)	(8,290)	
Cash generated from operations	6,010	
Interest paid	(124)	
Income taxes paid (W4)	(485)	
Net cash from operating activities		5,401
Cash flows from investing activities		
Purchase of property, plant and equipment (W6)	(8,000)	
Proceeds from sale of equipment	730	
Net cash used in investing activities		(7,270)
Cash flows from financing activities		
Proceeds from issue of share capital (W5)	3,019	
Repayment of long term borrowings	(1,200)	
Dividends paid (W3)	(1,000)	
Net cash from financing activities		819
Net decrease in cash and cash equivalents		(1,050)
Cash and cash equivalents at 30 September 2002		1,200
Cash and cash equivalents at 30 September 2003		150

Notes

1 During the period the company acquired property, plant and equipment with an aggregate cost of $8 million. These were paid for by cash.

2 Cash and cash equivalents consist of cash on hand and balances with banks. Cash and cash equivalents included in the cash flow statement comprise the following balance sheet amounts:

	2002	*2003*
	$000	*$000*
Cash on hand and balances with banks	1,200	150

Workings

	$000
W1 Cash receipts from customers	
Trade Receivables	
Balance at 30 September 2002	800
Revenue from Income statement	15,000
	15,800
Balance at 30 September 2003	1,500
Receipts	14,300
W2 Cash paid to suppliers and employees	
Cost of Sales	
Income Statement	9,000
Less depreciation (W6)	(2,640)
Less loss on disposal	(970)
Income Statement cost of sales	5,390
Less inventory at 30 September 2002	(1,100)
	4,290
Add inventory at 30 September 2003	1,600
Purchases	5,890
Trade Payables	
Balance at 30 September 2002	800
Purchases	5,890
	6,690
Less balance at 30 September 2003	(700)
Payments to suppliers	5,990
Total payments to suppliers and employees	
Payments to suppliers	5,990
Other expenses from Income Statement	2,300
Total	8,290
W3 Dividends	
Balance at 30 September 2002	600
Income statement	1,100
	1,700
Less balance at 30 September 2003	(700)
Paid	1,000
W4 Income Taxes	
Balance at 30 September 2002	
Taxes	685
Deferred tax	400
	1,085
Income Statement	1,040
	2,125
Less balance at 30 September 2003	
Taxes	(1,040)
Deferred tax	(600)
	485

W5 – Share capital

Balance at 30 September 2002	7,815
Balance at 30 September 2003	10,834
Cash issue	3,019

W6 – Tangible non-current assets

Property	*Cost*	*Depreciation*
	$000	*$000*
Balance at 30 September 2002	8,400	1,300
Balance at 30 September 2003	11,200	1,540
Purchased	2,800	
Depreciation in year		240

Plant	*Cost*	*Depreciation*
	$000	*$000*
Balance at 30 September 2002	10,800	3,400
Less disposal	2,600	900
	8,200	2,500
Balance at 30 September 2003	13,400	4,900
Purchased	5,200	
Depreciation in year		2,400

Total purchases	*$000*
Property	2,800
Plant	5,200
	8,000

Total depreciation	
Property	240
Plant	2,400
	2,640