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UNIVERSITY OF LONDON

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**BSc degrees and Diplomas for Graduates in Economics, Management, Finance and the Social Sciences, the Diploma in Economics and Access Route for Students in the External Programme**

**Elements of Accounting and Finance**

Tuesday, 9 May 2006: 2.30 to 5.30 pm

Candidates should answer **FOUR** of the following **SIX** questions: **QUESTION 1** of Section A, **TWO** questions from Section B and **ONE** question from Section C. All questions carry equal marks.

Workings should be submitted for all questions requiring calculations. Any necessary assumptions introduced in answering a question are to be stated.

Extracts from compound interest tables are given at the end of the paper.

8 column accounting paper is provided. If used, it must be fastened securely inside the answer book.

A hand held calculator may be used when answering questions on this paper but it must not be pre-programmed or able to display graphics, text or algebraic equations. The make and type of machine must be stated clearly on the front cover of the answer book.

PLEASE TURN OVER

## SECTION A

Answer **both** parts of question 1.

1. Grange plc is a food distributor. The following trial balance was extracted from its accounting records as at 31 December 2005:

	£000s	£000s
Land at cost	2,400	
Buildings: cost	1,700	
provision for depreciation at 1 January 2005		170
Motor vehicles: cost	800	
provision for depreciation at 1 January 2005		320
Stock of goods at cost, 1 January 2005	280	
Trade debtors	920	
Prepaid insurance at 1 January 2005	6	
Cash at bank	472	
Trade creditors		830
Share capital (25p ordinary shares)		1,000
Share premium account		500
6% debentures, 2012		2,000
Retained profits at 1 January 2005		856
Sales		7,619
Returns inwards	320	
Purchases	5,480	
Wages and salaries	360	
Directors' salaries	90	
Heat, light and power	92	
Distribution costs	125	
General administration costs	130	
Dividend paid	120	
	<u>13,295</u>	<u>13,295</u>

The following additional information is available:

(1) Depreciation is to be provided on fixed assets at the following annual rates:

Buildings	2% per year on cost
Motor vehicles	20% per year on a decreasing-balance basis.

(2) The stock was counted at the close of business on 31 December 2005 and valued at its selling value of £400,000. The normal mark-up on cost is 33 $\frac{1}{3}$ %. It has subsequently been found that this sum includes goods which would normally sell for £36,000 but, as they are past their 'sell-by' date, they will have to be destroyed.

(question continues on next page)

Extracts from compound interest tables

n	$(1 + i)^n$	$v^n$	$s_{\overline{n} i}$	$a_{\overline{n} i}$
<b>i = 0.03</b>				
1	1.03	.97	1.00	.97
2	1.06	.94	2.03	1.91
3	1.09	.92	3.09	2.83
4	1.13	.89	4.18	3.72
5	1.16	.86	5.31	4.58
<b>i = 0.04</b>				
1	1.04	.96	1.00	.96
2	1.08	.92	2.04	1.89
3	1.12	.89	3.12	2.78
4	1.17	.85	4.25	3.63
5	1.22	.82	5.42	4.45
<b>i = 0.05</b>				
1	1.05	.95	1.00	.95
2	1.10	.91	2.05	1.86
3	1.16	.86	3.15	2.72
4	1.22	.82	4.31	3.55
5	1.28	.78	5.53	4.33
<b>i = 0.10</b>				
1	1.10	.91	1.00	.91
2	1.21	.83	2.10	1.74
3	1.33	.75	3.31	2.49
4	1.46	.68	4.64	3.17
5	1.61	.62	6.11	3.79
<b>i = 0.12</b>				
1	1.12	.89	1.00	.89
2	1.25	.80	2.12	1.69
3	1.40	.71	3.37	2.40
4	1.57	.64	4.78	3.04
5	1.76	.57	6.35	3.60
<b>i = 0.15</b>				
1	1.15	.87	1.00	.87
2	1.32	.76	2.15	1.63
3	1.52	.66	3.47	2.28
4	1.75	.57	4.99	2.86
5	2.01	.50	6.74	3.35
<b>i = 0.20</b>				
1	1.20	.83	1.00	.83
2	1.44	.69	2.20	1.53
3	1.73	.58	3.64	2.11
4	2.07	.48	5.37	2.59
5	2.49	.40	7.44	2.99

END OF PAPER

- (3) A customer owing £20,000 has recently been declared bankrupt. The company does not expect to recover any of this debt and it is to be written off. A provision for doubtful debts of 3% of the remaining debtors is to be created.
- (4) One year's interest on the 6% debentures was due for payment on 31 December 2005 but was paid in the following week.
- (5) The invoice for heat, light and power for December 2005 had not been received or paid by that date. It was estimated to be £8,000.
- (6) Distribution costs for the year include insurance cover for the motor vehicles of £32,000. This is paid annually in advance on 1 April for the following twelve month period. There were no other prepayments.
- (7) Corporation tax on the profit of the year is to be provided and the provisional estimate is £70,000.

**Required:**

- (a) Prepare a profit and loss account for the directors of Grange plc, in good style, for the year ended 31 December 2005. **(17 marks)**
- (b) Give the formula for calculating the dividend cover ratio and calculate it for Grange plc. Give **three** reasons why a company may choose not to distribute all the profit earned in a year as dividend to its shareholders. **(8 marks)**

## SECTION B

Answer **two** questions from this section.

2. Answer **four** of the following six parts. Each answer is not to exceed 200 words in length (in addition to any necessary calculations and workings). *Excessive length will be penalised.*

(a) Explain what you understand by the following concepts:

- i. accruals
- ii. consistency.

In each case give an example and explain why the concept is important when preparing a company's annual accounts.

(b) Norman Ltd is a trading company and its accounting records are kept manually. Its end of year trial balance does not balance, the total of the debit balances being £1,242 more than the total of the credit balances. List and briefly explain **six** checks that you would make in order to try to eliminate the difference.

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

- i. Give calculations to show the charge in respect of equipment that would appear in the profit and loss account for the year ended 30 April 2006.
- ii. Draft a suitably headed extract from the company's end of year balance sheet showing all figures relating to equipment.

(d) 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 (ie its net profit before interest and tax).

6. Pentator Ltd. is considering whether to replace one of its existing machines to produce more efficiently an important component, XC187. So far, £15,000 has been spent on a feasibility study. You have been provided with the following information:

(1) Initial cost of the new machine	£107,500
Estimated life	5 years
Estimated residual value after five years	£10,000

(2) The company uses straight-line depreciation for all its machines.

(3) The estimated savings to Pentator Ltd from replacement of the machine are estimated to be

- i. 500 man hours of maintenance labour per year, plus
- ii. 10 man hour per year for each 10,000 units of XC187 produced.

(4) Wages are estimated to be £34 per man hour, rising by 3% per year from the end of year 1.

(5) The expected output of XC187 is 300,000 units in the first year, rising by 20,000 per year thereafter.

(6) The company's cost of capital is 15% per year.

Assume that all cash flows arise at the end of the year concerned except as indicated above.

### Required:

(a) Advise the directors of Pentator Ltd whether or not the machine should be purchased. Include all relevant calculations in the form of a table and explain your answer carefully. **(12 marks)**

(b) Explain whether your answer to (a) would change if you had been given the following information about the machine currently used for producing XC187:

Cost	£80,000	
Written down value	£20,000	
Scrap value now	£5,000	
Scrap value at the end of year 5	£3,000	<b>(7 marks)</b>

(c) Briefly explain why discounted cash flow analysis is appropriate when evaluating long-term projects. **(6 marks)**

All calculations should be to the nearest whole number.

(question continues on next page)

## SECTION C

Answer **one** question from this section.

5. Miranda plans to set up business as a sole trader selling personal digital entertainment gadgets. Her plans and projections are as follows:

- (1) Business will commence on 1 June and, on that day, she will open a business bank account with £50,000 that has been left to her by her grandmother. This will be the initial capital of the business. She will immediately pay £24,000 for shop fittings and equipment which are expected to last eight years and to have a residual value of zero.
- (2) Market research suggests that monthly sales are likely to be:  
£40,000 in June and July  
£50,000 in August and September  
£54,000 in October and subsequent months.
- (3) 50% of sales revenue will be received in the month of sale and 50% in the following month. Sales price is calculated using a mark-up on cost of 30%.
- (4) Purchases are to be made, and paid for, in the month before sale so that, for example, purchases made in August will be sufficient for sales expected in September. The only exception is that goods for sale in June will be purchased, and paid for, at the beginning of June.
- (5) Rent, which is £12,000 per year is payable three months in advance commencing on 1 June. Administrative expenses amount to £6,000 per month and will be paid for in the month to which they relate.
- (6) Miranda plans to borrow £25,000 on 1 June. She would like to repay this loan on 30 November together with interest of £1,200.

### Required:

- (a) Prepare a cash budget for the first five months of business showing receipts, payments and the closing balance for each month separately. **(10 marks)**
- (b) Prepare a budgeted profit and loss account for the first five months of Miranda's business. **(8 marks)**
- (c) Critically appraise Miranda's cash flow and trading projections. Make any recommendations you consider appropriate to deal with the situation revealed. **(7 marks)**

(e) Explain the following terms:

- i. Maintenance of financial capital in money terms
- ii. Maintenance of financial capital in real terms.

Use a simple numerical example to illustrate each case. Why is the distinction important in accounting?

(f) Your colleague has recently inherited 5,000 shares in X 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.

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 there are to your calculations.

3. (a) The following figures appear in the recent draft balance sheet of Minkay plc:

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

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 (2) above 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:**

- i. Give calculations to show the effect on the company's balance sheet if each of the three changes given above is made. Explain briefly whether each satisfies the stated objectives and is a sensible suggestion. **(9 marks)**
  - ii. Redraft the balance sheet extract after incorporating the three changes and calculate the company's gearing ratio before and after the changes. **(7 marks)**
- (b) Minkay 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. **(9 marks)**

4. Victor has been told by a friend that Masertogs plc has a bright future so he is considering whether to buy shares in the company. He has provided you with the following summarised information taken from its most recent annual accounts:

	£000s
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 Masertogs plc is currently 260 pence and has been around this level for the past few months.

The trade association to which Masertogs 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 Masertogs plc giving the formula in each case. Use the statistics to comment on the company's recent performance. Any assumptions must be stated. **(18 marks)**
- (b) What further information would you advise Victor to seek before deciding whether or not to buy shares in Masertogs plc? Explain why this information is needed. **(7 marks)**