MANUFACTURING ENGINEERING TRIPOS PART I

Friday 28 April 2006 9 to 12

PAPER P3

MANAGEMENT ECONOMICS AND ACCOUNTING

*Answer not more than **four** questions of which not more than **one** may be taken from each section **A, B, C** and **D**.*

*Answers to sections **A, B, C** and **D** must appear in four separate booklets.*

All questions carry the same number of marks.

*The **approximate** percentage of marks allocated to each part of a question is indicated in the right margin.*

There are no attachments.

STATIONERY REQUIREMENTS
8 page Answer book x4
Rough Work Pad

SPECIAL REQUIREMENTS
Engineering Data Book
CUED approved calculator allowed

You may not start to read the questions printed on the subsequent pages of this question paper until instructed that you may do so by the Invigilator

SECTION A

*Answer **one** question from this section.*

1 An industry has the following demand curve for its product:

$$Q = 8{,}000 - 500\,P$$

where Q is the total industry demand and P is the price at which the product is sold. Firms within the industry have the following cost function:

$$TC = 1{,}000 + 8\,q + 0.001\,q^2$$

where TC is the total cost of each individual firm and q is the output of each individual firm.

(a) Find the long-run competitive equilibrium for the industry in terms of price, output and profits. Comment on the economic significance of your findings. [20%]

(b) Why is the shape of firms' short-run and long-run cost curves important? [20%]

(c) What are the sources of economies and diseconomies of scale? [30%]

(d) What does empirical research tell us about the shape of cost curves in practice? [30%]

2 (a) Explain the role of non-executive directors in the corporate governance of a public listed company. [30%]

(b) Discuss the potential problems associated with this role and suggest ways in which these may be avoided. [40%]

(c) What other forms of monitoring might be used to supplement, or replace, the role played by non-executive directors? [30%]

SECTION B

*Answer **one** question from this section.*

3 (a) Explain briefly what is meant by each of the following accounting terms:

(i) 'True and fair view' [5%]

(ii) Historical cost concept [5%]

(iii) Exceptional items [5%]

(iv) Minority interests [5%]

(b) At the end of the financial year to 31 December 2004, Neal's Ltd. had the following balance sheet:

	2004
	£
Fixed assets	275,250
Current assets	
Stock	54,500
Debtors	78,100
Cash at bank	10,300
Current liabilities	
Creditors	45,400
Interest	2,500
Tax	8,000
Dividends	6,000
Net assets	356,250
Long term liabilities	
Long term loan 5%	50,000
Total net assets	306,250

(cont.

Ordinary shares of £1 each	100,000
Share premium	100,000
Profit and loss account	106,250
Capital & reserves	306,250

The following information is available for the financial year to 31 December 2005:

Bought goods for £310,000, paid £270,000 with £40,000 remaining to be paid.
Sold goods for £659,000, received £590,000, with £69,000 remaining to be received.
One debtor owing £10,000 went bankrupt.
Wages paid £157,800.
Other expenses £41,700.
Rent and rates £36,000 (£3,000 in advance for next year).
Bought machinery for £60,000 on 31st March, expected to last 10 years. Depreciation on the firms other fixed assets is equal to £30,000 for the year.
Stocks at end £60,000.
Declared dividends of £10,000.
In order to finance a future acquisition, Neal's Ltd. raised £125,000 from a share issue which involved 50,000 ordinary shares.
Taxation rate is 30%.

Prepare a profit and loss account and balance sheet for Neal's Ltd. for the year to 31 December 2005. Show your workings clearly and briefly explain any assumptions you make.

[80%]

4 You have been asked by Rumbold Ltd. to report to the Board of Directors on the company's cash situation. The directors are concerned that, although generating cash was one of the key objectives of the last year, the company has actually consumed cash. The balance sheet at 31 December 2005 is shown below together with the comparative figures for 2004:

	2005	2004
	£	£
Fixed assets	849,162	853,962
Current assets		
Stock	97,593	84,829
Debtors	176,041	157,494
Cash at bank	-	5,480
Current liabilities		
Creditors	137,065	128,569
Interest	3,000	3,000
Tax	9,000	25,700
Dividends	5,000	9,000
Bank overdraft	11,464	-
Net assets	957,267	935,496
Long term liabilities		
Long term loan 4%	150,000	150,000
Total net assets	807,267	785,496
Ordinary shares of £1 each	400,000	400,000
Share premium	40,000	40,000
Profit and loss account	367,267	345,496
Capital & reserves	807,267	785,496

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The following information has been extracted from the profit and loss account for the year to 31 December 2005:

Depreciation charge	£15,800
Tax charge	£9,000
Interest charge	£6,000
Dividends declared	£5,000

(a) Prepare Rumbold Ltd.'s cash flow statement for the year to 31 December 2005. [70%]

(b) Identify the main issues which are apparent from the cash flow statement and suggest actions the company might take to improve cash flow. [30%]

SECTION C

*Answer **one** question from this section.*

5 Mitchell Ltd. is a television manufacturing company organised in four divisions. The manufacturing division buys in components and manufactures televisions. This division also sells televisions to the general public. The rental division leases televisions to the general public. All these televisions are supplied by the manufacturing division and the lease includes all repairs. The second-hand division sells second-hand televisions. These are acquired from: the manufacturing division, which sometimes allows a trade-in of an old television when a new one is purchased; the rental division, which transfers ex-rental televisions to this division; and purchases from the general public. The repair division carries out repairs and servicing for the other three divisions and the general public.

Robert Mitchell, the founder and owner of the business, is concerned about the current financial reporting and management system. The managers of each division receive a salary and also performance related pay, based on the profits of their division. Over the last few months there has been frequent disagreement between the divisional managers concerning the prices charged for goods and services that are transferred between divisions. As these transfer prices affect divisional profits and thus performance-related pay, Robert Mitchell is anxious that transfer prices are determined in a manner that reduces conflict and increases motivation.

(a) Explain why businesses adopt a divisional structure and what the potential drawbacks of this type of structure are. [30%]

(b) Describe the main approaches to divisional transfer pricing and evaluate their strengths and weaknesses. [30%]

(c) Make specific recommendations regarding transfer pricing for Mitchell Ltd., giving your reasons clearly. [40%]

6 Discuss the potential benefits and practical implications of adopting the following performance measures:

(a) Competitor profitability analysis [20%]

(b) Customer profitability analysis [20%]

(c) Shareholder value analysis [20%]

(d) Non-financial performance analysis [20%]

(e) Balanced scorecard analysis [20%]

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SECTION D

*Answer **one** question from this section.*

7 'Firms should not worry about what their gearing level is, because Modigliani and Miller showed clearly that capital structure has no impact on firm value'. Discuss. [100%]

8 'Risk management is a waste of time. Risk is a normal part of business and there is little that firms can do to avoid it'. Discuss. [100%]

END OF PAPER