Friday 29 April 2005   9 to 12

PAPER P3

MANAGEMENT ECONOMICS AND ACCOUNTING

*Answer not more than **four** questions.*

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.

> **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**

1   An industry is characterised by two technologies used by firms that compete with each other by producing an identical product. The demand for the product can be summarised by the following demand function:

$$P = 3762 - 0.01\ Q$$

where P is the price at which the product is sold and Q is the total annual amount that can be sold at this price.

The total cost functions for producing this product for each technology are given by the expressions:

$$TC_1 = 5000 + 50\ q_1 + 0.005\ q_1{}^2$$
$$TC_2 = 10000 + 100\ q_2 + 0.001\ q_2{}^2$$

where q_1 and q_2 are the annual outputs of firms with technology 1 and technology 2 respectively.

(a) Assume that there are twenty firms of each technology operating under conditions of short-run perfect competition and find the profit-maximising outcome for the outputs of each type of firm and the price.
[16%]

(b) What would be the long-run outcome in terms of output and price under these conditions if the industry remained perfectly competitive?
[16%]

(c) If there were only one firm of each technology operating under conditions of short-run perfect competition, what would be the outcome in terms of their outputs and the price?
[16%]

(d) If, instead, both these firms were to maximise profit on the assumption that the output of the other firm is fixed (the Cournot assumption), what would be the outcome under these conditions for their outputs and the price?
[16%]

(e) If the two firms were to collude in order to maximise their joint profits, what would be the outcome under these conditions for their outputs and the price?
[16%]

(f) Briefly discuss the assumptions you have made in your answers and the economic implications of the outcomes.
[20%]

2   'Economies of scale are the primary driving force behind merger and acquisition activity, and the empirical evidence on mergers and acquisitions clearly shows this.' Discuss.   [100%]

3   'The separation of ownership and control in modern public corporations results in managers pursuing very different goals from shareholders, and there appears to be little constraint on managers in the pursuit of these goals.' Discuss the theoretical and empirical support for this statement.
        [100%]

4   (a)   What is industrial concentration and how is it measured?
        [20%]

        (b)   Why is it important to monitor changes in concentration and the determinants of these changes?
        [20%]

        (c)   Discuss whether the post-war changes in UK concentration merit government intervention.
        [60%]

5   Bloggins Limited was incorporated on 1ˢᵗ January 2004. The following figures have been extracted from the trial balance as at 30ᵗʰ November 2004:

	£
Share capital (50,000 shares with a par value of £1 each)	50,000
Opening stock	0
Purchases	60,000
Sales	245,000
Rent	20,000
Wages	55,000
Expenses	30,000
Equipment	100,000
Debtors	20,000
Creditors	10,000
Bank account	20,000

The following transactions took place during the month to 31ˢᵗ December 2004:

December 1	Raised capital of £100,000 in the form of a share issue, consisting of 50,000 shares with a par value of £1 each. Paid into bank.
December 1	Bought equipment by cheque for £24,000
December 7	Paid cheque £5,000 to creditors
December 10	Paid expenses by cheque £3,000
December 13	Goods previously sold on credit are returned by customers £5,000
December 13	Sold goods on credit for £20,000
December 15	Purchased goods on credit for £5,000
December 23	Received payment of £10,000 from debtors
December 29	Paid wages £5,000
December 30	Paid rent £5,000

    (a)   Enter the transactions for December in their correct ledger accounts.
[30%]

    (b) Balance off the ledger accounts and work out a trial balance for the year.
      [20%]

    (c) Transfer the ledger accounts to the profit and loss account and the balance sheet for the year to 31ˢᵗ December 2004, taking into account the following end of year adjustments:

(cont.

<u>End of year adjustments</u>

Stock at 31st December 2004 valued at cost amounted to £20,000.

Pre-paid rent at 31st December 2004 amounted to £5,000.

Depreciation is to be charged on the equipment at a rate of 10% on historical cost.

Wages owed amounted to £5,000.

Corporation tax rate on profits for the year is 33%.

A final dividend of 10p per share has been declared for the year.

[50%]

6   (a)   Provide examples of each of the following measures of company performance. In each case explain how the measure is calculated and discuss its strengths and weaknesses.

(i) Profitability ratios
[16%]

(ii)   Efficiency ratios
[16%]

(iii)   Investors ratios
[16%]

(iv)   Liquidity ratios
[16%]

(v)   Capital structure ratios
[16%]

(b)   What other sources of information would be useful in judging the performance of a company?
[20%]

7   'In the modern manufacturing environment, activity based costing systems are far superior to traditional absorption based methods'. Discuss.

   [100%]

8   Johnsons plc is considering whether to produce 1,000 units of a new product, "Beta", for a new customer. The following cost information on the production of Betas is available:

£6,500 has been spent already on the development work for the production of Betas. It is estimated that before production of Betas is started, a further £5,000 will need to be spent, making a total development cost of £11,500.

Each unit of Beta requires 6 hours of unskilled labour and 10 hours of skilled labour in its manufacture. Skilled labour is paid £8 per hour and unskilled labour £5 per hour. The company has a surplus of unskilled workers currently employed and paid, with 1,800 worker hours available during the period of the contract. The balance of the unskilled labour requirements could be met by working overtime, which is paid at £7 per hour. There is a shortage of skilled labour, so that if production of Beta goes ahead it will be necessary to transfer skilled workers from other work to undertake it. The other work on which skilled workers are engaged at present is the manufacture of Alpha. The selling price and cost information for Alpha are as follows:

	£/unit
Selling price	200
Less: Variable costs of production	
Skilled labour	-48
Other variable costs	-62
	90

(cont.

Each unit of Beta requires 8 kg of raw material A and 12 kg of raw material B. The company has 10,000 kg of A currently in stock. This material was purchased last year at a cost of £14 per kg. If not used in the manufacture of Beta the stock of A could either be sold for £15 per kg or converted at a cost of £3 per kg, so that it could be used as a substitute for another raw material C, which the company requires for other production. C can be purchased at a current price of £19 per kg and A for £16.50 per kg. There are 20,000 kg of raw material B in stock valued on a first-in first-out basis at a total cost of £284,000. 6,000 kg of the current stock was purchased six months ago at a cost of £26 per kg and the balance of the stock was purchased last month. B is a material that is used regularly by the company on normal production work. Since the last purchase of B one month ago, the price per kg that Johnsons pays for B has increased by 5%.

The company absorbs production overheads by a machine hour rate which is currently £45 per hour, of which £17.50 is for variable overheads and the balance for fixed overheads. If production of Beta is undertaken, it is estimated that fixed costs will increase by £8,000 in total for the duration of the work. Spare machining capacity is available and each unit of Beta will require 4 hours of machining time in its manufacture using the existing equipment. In addition, special finishing machinery will be required to complete the Betas in their final 4 weeks of manufacture. This machinery will be hired at a cost of £4,000 per week.

(a) Calculate the absolute minimum price that the company should be prepared to accept for the 1,000 Betas. Show your workings clearly and provide an explanation for the inclusion of each cost figure.
[80%]

(b) If Johnsons were to use a cost-plus pricing method to price Beta, what sort of factors might determine the size of the mark-up charged?
[20%]

9   (a)   Compare and contrast the different sources of long term finance available to a company.
     [60%]

     (b)   How would you estimate the costs of these different sources of finance?
     [40%]

10   (a)   Compare and contrast the different methods that are available for valuing a publicly listed company.
     [64%]

     (b) How would your method differ for the following types of company?

           (i)   A public company which is vulnerable to takeover
                              [12%]

           (ii)   A private company
                              [12%]

           (iii)   A recently formed start-up company
                              [12%]

END OF PAPER