MANUFACTURING ENGINEERING TRIPOS PART I

Friday 27 April 2007 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 booklet 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 (a) Outline Porter's 5 forces and discuss the way in which they influence the strength of industry competition. [40%]

(b) Discuss the way in which these forces can be measured in practice. [30%]

(c) Assess the strengths of these individual forces for an industry of your choosing. [30%]

2 'The primary goal of top management is to maximise profit for their shareholders. Even if management wanted to pursue some other goal, market forces would totally constrain them from doing so'. Discuss. [100%]

SECTION B

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

3 (a) What are the key differences between merger accounting and acquisition accounting? [35%]

(b) What are the different methods for dealing with goodwill under acquisition accounting and what are their strengths and weaknesses? [35%]

(c) What are the weaknesses of merger accounting that have led to it recently being banned in the US and UK? [30%]

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

(i) accruals concept; [5%]

(ii) matching concept; [5%]

(iii) quick ratio; [5%]

(iv) share premium. [5%]

(b) Johnson Limited was incorporated on 1 January 2006 with an authorised share capital of 800,000 £1 ordinary shares, and 200,000 4% preference shares of £1 each. The following trial balance has been extracted from the books of Johnson Limited as at 31 December 2006:

	Dr (£,000)	Cr (£,000)
Administrative expenses	500	
Cash	60	
Creditors		220
Loans (6%)		200
Interest paid	12	
Debtors	320	
Dividends paid:		
Ordinary interim	20	
Preference	8	
Equipment at cost	1,400	
Ordinary share capital		800
Preference share capital		200
Purchases	620	
Sales		1,400
Share premium account		200
Wages	80	
	£3,020	£3,020

The following information is available for the financial year to 31 December 2006:

- Stock at 31 December 2006 valued at cost amounted to £195,000.
- Administrative expenses owing at 31 December 2006 amounted to £25,000.
- The equipment purchased during the year (on 31 March 2006) is expected to last 10 years and to have a salvage value of £20,000.
- Wages paid in advance amounted to £8,000.
- Corporation tax is charged at 30%.
- Provision is to be made for a final ordinary dividend of 5p per share.
- A debtor has gone bankrupt owing £32,000.

Prepare a profit and loss account and balance sheet for Johnson Limited for the year to 31 December 2006. Show your workings clearly and briefly explain any assumptions you make. [80%]

SECTION C

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

5 (a) Describe and explain the differences between traditional absorption costing using a volume-based allocation base, and activity-based costing. [30%]

(b) Smiths Limited manufactures a range of products that are sold to many customers. Smiths' current practice is to charge all overheads, including customer-related costs on the basis of volume sold. It is known that customers have different requirements. The sales director has suggested that an activity-based costing approach would be appropriate and has ordered an investigation into customer related costs. The following data have been collected for three customers who each purchase one particular product. The main cost drivers appear to be: number of orders; the number of invoices issued; delivery pack size; and delivery frequency and distance. One order may require delivery to more than one destination. Before delivery, units are packed in containers of different sizes. Each customer specifies one pack size – that is, the same number of units in a pack – for all their purchases.

	Customers			Total for company
	1	2	3	
Quantity ordered per year (units)	160,000	102,000	200,000	1,700,000
Number of orders per year	48	120	24	2,400
Number of invoices issued per year	24	120	24	2,200
Delivery pack size (units)	400	100	1,000	-
Delivery packs assembled per year (units)	-	-	-	8,500
Deliveries per month	8	20	2	240
Distance per average delivery (miles)	400	200	300	-
Total annual delivery mileage	-	-	-	480,000

An analysis of the annual customer-related costs is set out below.

	£
Order costs	288,000
Invoice costs	66,000
Delivery pack costs	187,000
Delivery mileage costs	168,000
Delivery fixed costs	107,000
Total annual customer-related costs	816,000

The fixed delivery costs are to be attributed to customers by quantity of units purchased. The profit per unit sold to these customers is £1 before customer related costs are deducted.

Calculate the profit that Smiths earned on each of Customers 1, 2 and 3, using both their current practice and activity-based costing. [50%]

(c) Discuss and explain possible managerial actions as a result of your answers in (b) above. [20%]

6 Critically evaluate the different techniques that firms can use to price their products at both

(a) the firm level, and; [50%]

(b) the intra-firm level (i.e., transfer pricing between divisions). [50%]

SECTION D

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

7 (a) Discuss the advantages and disadvantages of different investment appraisal techniques. [60%]

(b) How should a firm determine the appropriate discount rate to be used for its investment appraisal? [40%]

8 (a) Under what conditions will a company's dividend payout ratio affect its market valuation? [60%]

(b) Which factors does management take into account when deciding upon the level of the dividend payout ratio? [40%]

END OF PAPER

Version 4