Version CV/02

MET 2

MANUFACTURING ENGINEERING TRIPOS PART IIA

Thursday 8 May 2025 9:00 to 12:10

Paper 5

Module 3P8: FINANCIAL AND MANAGEMENT ACCOUNTING

Module 3P9: INDUSTRIAL ECONOMICS, STRATEGY AND GOVERNANCE

Answer four questions, two from each of sections ***A and B.***

All answers 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.*

Write your candidate number <u>*not*</u> *your name on the cover sheet of each booklet.*

STATIONERY REQUIREMENTS

8 page answer booklet x 4

Rough work pad

SPECIAL REQUIREMENTS TO BE SUPPLIED FOR THIS EXAM

CUED approved calculator allowed

Engineering Data Book

10 minutes reading time is allowed for this paper at the start of the exam.

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

You may not remove any stationery from the Examination Room.

SECTION A

Answer two questions from this section.

Question 1

Cavendish plc's finance manager has prepared a draft trial balance for the business as at 30 June 2021 which is presented below:

	Dr	Cr
	£'000	£'000
Freehold premises	2,400	
Plant and machinery	1,800	540
Furniture and fittings	620	360
Inventory at 30 June 2021	1,468	
Sales		6,465
Administrative expenses	1,126	
Ordinary shares of £1 each		4,500
Trade investments	365	
Revaluation reserve		600
Development cost	415	
Share premium		500
Trade receivables	947	
Trade payables		566
Cost of goods sold	4,165	
Distribution costs	669	
Overprovision for tax		26
Dividend received		80
Interim dividend paid	200	
Retained earnings		488
Disposal of warehouse		225
Cash and bank balances	175	
Total	14,350	14,350

The following information is available:

1. Freehold premises acquired for £1.8 million were revalued in 2018, recognising a gain of £600,000. These include a warehouse, which cost £120,000, was revalued at £150,000 and was sold in June 2021 for £225,000. Cavendish does not depreciate freehold premises.
2. Cavendish wishes to report plant and machinery at open market value, which is estimated to be £1,960,000 on 1 July 2020.
3. The firm's policy is to depreciate its assets on the straight-line method at annual rates as follows:

(cont.

Plant and machinery 10%

Furniture and fittings 5%

4. Until this year the firm's policy has been to capitalise development costs, to the extent permitted by relevant accounting standards. The firm must now write off the development costs, including £124,000 incurred in the year, as the development project no longer meets the capitalisation criteria.
5. During the year the firm has issued one million shares of £1 at £1.20 each.
6. Included within administrative expenses are the following:

Staff salary (including £125,000 to the directors)	£468,000
Directors' fees	£96,000
Audit fees and expenses	£86,000

7. Income tax for the year is estimated at £122,000.
8. Directors propose a final dividend of 4p per share declared and an obligation, but not paid at the year-end.

Answer the following questions:

(a) Provide a *profit and loss account* for the year ending 30 June 2021.

[40%]

(b) Provide a detailed *balance sheet* as at 30 June 2021.

[40%]

(c) The managing director proposes to change the depreciation policy from the *straight-line method* to the *reducing balance method*. Write a memo to the managing director explaining what depreciation is and discuss the implications of changing the depreciation policy for Cavendish plc.

[20%]

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Question 2

You are a trainee accountant working at an accounting firm on two unrelated client assignments, Nilgiris Ltd and Conoor Ltd respectively.

(a) Nilgiris Ltd provided the following information from its records for the year ended 30 September 2024.

	£000
Sales	316,000
Cost of goods sold	110,400
Other expenses	72,000
Rent expenses	14,400
Dividends	10,000
Depreciation – Plant and equipment	8,000
Advertising expenses	4,800
Gain on sale of equipment	2,520
Interest expenses	320

	2024	2023
	£000	£000
Accounts receivables	13,200	15,200
Inventory	18,400	19,200
Prepaid advertising	0	400
Accounts payable	11,200	8,800
Rent payable	0	1,200
Interest payable	40	0

(i) Using the direct method of presentation, prepare the operating activities section of the cash flow statement for the year ended 30 September 2024.

[30%]

(ii) Comment on the advantages and disadvantages of the direct method over the indirect method of preparing cash flow statements.

[20%]

(cont.

(b) Conoor Ltd is a firm in the retail home appliances business. The following information has been provided by Conoor Ltd for the three years ended 31 December 2022, 2023 and 2024.

Financial year ended on 31 December	**2022**	**2023**	**2024**
Return on equity	12.0%	21.0%	18.5%
Earnings per share (pence per share)	11.5	20.0	18.2
Dividend per share (pence per share)	11.0	15.0	15.0
Revenue (£ million)	2,240	2,350	2,235
Cash and cash equivalents (£ million)	–52	–52	–96
Cost of sales to sales revenue	85%	83%	80%
Operating expenses to sales revenue	10%	13%	16%
Net income to sales revenue	2.4%	2.5%	4.0%
Sales revenue to total assets	2.7	2.7	2.1
Current/Working capital ratio	1.20	1.40	1.05
Acid test ratio	0.75	1.0	0.70
Inventory turnover (months)	0.5	0.6	1.0
Credit to customers (receivable months)	1.2	1.4	1.6
Credit from suppliers (payable months)	1.4	1.5	2.5
Net assets per share (cents per share)	0.86	0.92	0.98

(i) Prepare a report on Conoor Ltd's financial performance including an indication of where improvements could be made and identify areas which you consider require further investigation.

[50%]

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Question 3

Caledonian Ltd has incurred expenditure of £5 million over the past three years researching and developing a miniature hearing aid. The hearing aid is now fully developed. The directors are considering which of three mutually exclusive options should be taken to exploit the potential of the new product. The business has a cost of capital of 10 per cent a year. The options are:

Option 1

Caledonian Ltd could manufacture the hearing aid itself. This would be a new departure, since Caledonian Ltd has so far concentrated on research and development projects. However, Caledonian Ltd has manufacturing space available that it currently rents to another business for £100,000 a year. This space will not continue to be leased if the decision is to manufacture the hearing aids. Caledonian Ltd would have to purchase plant and equipment costing £9 million and invest £3 million in working capital immediately for production to begin.

A market research report, for which Caledonian Ltd paid £50,000, indicates that the firm can manufacture and sell the hearing aid product for five years. Sales of the product during this period for the year ending 30 November are predicted as follows:

	Year 1	Year 2	Year 3	Year 4	Year 5
Number of units (000s)	800	1,400	1,800	1,200	500

The selling will be £30 per unit in the first year but will fall to £22 per unit in the following three years. In year 5 of the product's life, the selling price will fall to £20 per unit. Variable production costs are predicted to be £14 per unit. Fixed production costs (including depreciation) will be £2.4 million per year. Marketing costs will be £2 million per year.

Caledonian Ltd intends to depreciate the plant and equipment using the straight-line method and based on an estimated residual value at the end of the five years of £1 million.

(cont.

Option 2

Caledonian Ltd could agree with a multinational business, Faraday Electricals plc to manufacture and market the product under licence. In return Faraday Electricals plc will make a royalty payment to Caledonian Ltd of £5 per unit. It has been estimated that the annual number of sales of the hearing aid will be 10 per cent higher each year than the market research report prepared for Caledonian Ltd under Option 1.

Option 3

Caledonian Ltd could sell the patent rights to Faraday Electricals plc for £24 million, payable in two equal instalments. The first instalment would be payable immediately and the second at the end of two years. This option would give Faraday Electricals plc the exclusive right to manufacture and market the new product.

a) Calculate the *Net Present Value* (as at the beginning of Year 1) of each of the options available to Caledonian Ltd.

[80%]

b) Identify and discuss any other factors that Caledonian Ltd should consider before arriving at a decision.

[10%]

c) Based on (a) and (b), discuss what you consider to be the most suitable option

[10%]

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Interest rate p.a., r	Number of years, T	Present value of £1 receivable at the end of T years, $PV = \frac{1}{(1+r)^T}$
5%	1	0.9254
	2	0.9070
	3	0.8638
	4	0.8227
	5	0.7853
	6	0.7462
	7	0.7107
	8	0.6768
	9	0.6446
	10	0.6139
10%	1	0.9091
	2	0.8264
	3	0.7531
	4	0.6830
	5	0.6209
	6	0.5645
	7	0.5132
	8	0.4665
	9	0.4241
	10	0.3855
15%	1	0.8696
	2	0.7561
	3	0.6575
	4	0.5718
	5	0.4972
	6	0.4323
	7	0.3759
	8	0.3269
	9	0.2843
	10	0.2472
20%	1	0.8333
	2	0.6944
	3	0.5787
	4	0.4823
	5	0.4019
	6	0.3349
	7	0.2791
	8	0.2326
	9	0.1938
	10	0.1615

Table 1

SECTION B

Answer two questions from this section.

Question 4

Clarendon Ltd manufactures cosmetics and sells them using its own brand name via third party retailers and online marketplace. The Chief Strategy Officer of Clarendon Ltd attended a conference on strategy and heard in one of the plenary keynote addresses that *business model innovation* can create competitive advantage more than *product innovation* or *process innovation*.

(a) Explain the differences between *business model innovation*, *product innovation* and *process innovation*.

[20%]

(b) Explain why business model innovation would create competitive advantage more than *product innovation* or *process innovation* for Clarendon Ltd.

[20%]

(c) Discuss the challenges that Clarendon Ltd might face in trying to innovate its *business model*?

[60%]

Question 5

(a) Define the concept of a *perfectly competitive market*. Discuss how firms can apply the concept of *perfectly competitive market* to formulate its corporate and business strategy.

[50%]

(b) Discuss the concept of *coopetition* and when it might be helpful for firms formulating their competitive strategy.

[50%]

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Question 6

Rutherford Ltd is an established software firm that provides software for engineering design to manufacturing firms. The Chief Strategy Officer has heard recently that it is important to consider *cross-price elasticities* in deciding pricing in *two-sided markets* but in unsure how this might apply to Rutherford Ltd.

(a) Explain what *two-sided markets* are.

[15%]

(b) Explain the concept of cross price elasticities in two-sided markets.

[40%]

(c) Discuss how would you develop the pricing strategy for Rutherford Ltd by considering *cross-price elasticities* in *two-sided markets*?

[45%]

END OF PAPER