

General Comments

Overall a slightly higher quality of answers was presented compared with recent diets. However some of the technical aspects of the paper were poorly answered, especially the questions that related to topics that are fundamental to management accounting (for example the absorption of fixed production overheads). One of the most noticeable aspects was the inability of many candidates to put forward well constructed answers to the discursive questions.

The question paper included several traditional topics, for example investment appraisal, that were well answered. However, questions on topics that may not be considered as mainstream, for example, the Value Chain, were poorly answered.

The quality of writing and grammar was generally good, but it is obvious that many candidates have lost the ability to write clearly and have relied too heavily on computers to provide spelling and grammar checks to correct their work. The marking team also experienced great difficulty in marking the answers to numerical questions where candidates gave answers that were hard to follow. This unfortunately created a disadvantage for those candidates where the 'own figure' rules could not be applied.

The performance on question one (objective test questions) showed an improvement compared with May 2006, but once again some candidates did not respond correctly to the questions for example Q.1.4 asked for the answer to 'one decimal place of one year'. An answer of 2 years 7 months is not an answer that would gain the marks on offer.

Section A – 50 marks

Question 1.1

A processing company operates a common process from which three different products emerge. Each of the three products can then either be sold in a market that has many buyers and sellers or further processed independently of each other in three other processes. After further processing each of the products can be sold in the same market for a higher unit selling price. Which of the following is required to determine whether or not any of the products should be further processed?

- (i) Total cost of the common process
 - (ii) The basis of sharing the common process cost between the three products
 - (iii) The total cost of each of the three additional processes
 - (iv) The unit selling price of each product after further processing
 - (v) The unit selling price of each product before further processing
 - (vi) The percentage normal loss of each further process
 - (vii) The actual units of output of each product from the common process.
- A** (iii), (iv), (vi) and (vii) only
- B** (i), (ii), (iii), (iv), (vi) and (vii) only
- C** (i), (ii), (v) and (vii) only
- D** (iii), (iv), (v), (vi) and (vii) only

(2 marks)

The answer is **D**

Question 1.2

Z plc is preparing a quotation for a one off contract to manufacture an item for a potential customer. The item is to be made of steel and the contract would require 300 kgs of steel. The steel is in regular use by Z plc and, as a consequence, the company maintains an inventory of this steel and currently has 200 kgs in inventory. The company operates a LIFO basis of inventory valuation and its most recent purchases were as follows:

20 November 2006	150 kgs costing £600
3 November 2006	250 kgs costing £1,100

The steel is easily available in the market where its current purchase price is £4.25 per kg. If the steel currently held in inventory was to be sold it could be sold for £3.50 per kg.

The relevant cost of the steel to be included in the cost estimate is

- A £1,050
- B £1,260
- C £1,275
- D £1,300

(2 marks)

The answer is **C**

Workings

300 kgs @ £4.25 = £1,275

Question 1.3

X is considering the following five investments:

<i>Investment</i>	<i>J</i>	<i>K</i>	<i>L</i>	<i>M</i>	<i>N</i>
	\$000	\$000	\$000	\$000	\$000
Initial investment	400	350	450	500	600
Net Present Value	125	105	140	160	190

Investments J and L are mutually exclusive, all of the investments are divisible and none of them may be invested in more than once. The optimum investment plan for X assuming that the funding available is limited to \$1m is

- A** \$400,000 in J plus \$600,000 in N.
- B** \$400,000 in M plus \$600,000 in N.
- C** \$500,000 in M plus \$500,000 in N.
- D** \$350,000 in K plus \$600,000 in N plus \$50,000 in M.

(2 marks)

The answer is **C**

Workings

Calculate the profitability index values of each of the investments and rank them:

<i>Investment</i>	<i>Profitability Index</i>	<i>Rank</i>
J	0.3125	3 rd
K	0.3000	5 th
L	0.3111	4 th
M	0.3200	1 st
N	0.3166	2 nd

Invest in:

M	\$500,000	yielding \$160,000
N	\$500,000	yielding \$158,333
Total	\$1,000,000	yielding \$318,333

Question 1.4

A hospital is considering investing \$80,000 in a new computer system that will reduce the amount of time taken to process a patient's records when making an appointment. It is estimated that the cash benefit of the time saved will be \$20,000 in the first year, \$30,000 in the second year and \$50,000 in each of the next three years. At the end of five years the computer system will be obsolete and will need to be replaced. It is not expected to have any residual value.

Calculate the payback period to one decimal place of one year.

(2 marks)

Workings

After 2 years the total inflows = \$50,000

After 3 years the total inflows = \$100,000

Therefore payback occurs after **2.6 years**

Question 1.5

An investment company is considering the purchase of a commercial building at a cost of £0.85m. The property would be rented immediately to tenants at an annual rent of £80,000 payable in arrears in perpetuity.

Calculate the net present value of the investment assuming that the investment company's cost of capital is 8% per annum.

Ignore taxation and inflation.

(2 marks)

Workings

$£80,000 \times 1/0.08 = £1m$ therefore NPV = **£0.15m**

Question 1.6

A bakery produces three different sized fruit pies for sale in its shops. The pies all use the same basic ingredients. Details of the selling prices and unit costs of each pie are as follows:

	<i>Small</i> \$ per pie	<i>Medium</i> \$ per pie	<i>Large</i> \$ per pie
Selling price	3.00	5.00	9.00
Ingredients	1.80	2.40	4.60
Direct labour	0.40	0.50	0.60
Variable overhead	0.30	0.50	0.80
Weekly demand (pies)	200	500	300
Fruit (kgs per pie)	0.2	0.3	0.6

The fruit used in making the pies is imported and the bakery has been told that the amount of fruit that they will be able to buy for next week is limited to 300 kgs. The bakery has established its good name by baking its pies daily using fresh fruit, so it is not possible to buy the fruit in advance.

Determine the mix of pies to be made and sold in order to maximise the bakery's contribution for next week.

(3 marks)

Workings

	<i>Small</i>	<i>Medium</i>	<i>Large</i>
Contribution/pie	\$0.50	\$1.60	\$3.00
Contribution/kg	\$2.50	\$5.33	\$5.00
Ranking	3 rd	1 st	2 nd
Make (pies)	NIL	500	250
Uses (kgs)	NIL	150	150

Question 1.7

H is launching a new product which it expects to incur a variable cost of \$14 per unit. The company has completed some market research to try to determine the optimum selling price with the following results. If the price charged was to be \$25 per unit then the demand would be 1,000 units each period. For every \$1 increase in the selling price, demand would reduce by 100 units each period. For every \$1 reduction in the selling price, the demand would increase by 100 units each period.

Calculate the optimum selling price.

Note: If Price (P) = a – bx; then Marginal Revenue = a – 2bx

(3 marks)

Workings

Marginal cost (MC) = \$14

Price (P) = \$35 – 0.01q

Marginal Revenue (MR) = \$35 – 0.02q

So if MC = MR then:

$$14 = 35 - 0.02q$$

$$0.02q = 21$$

$$q = 1,050$$

$$\text{Price} = \$35 - (0.01 \times 1,050) = \$24.50$$

Question 1.8

A company sells three different levels of TV maintenance contract to its customers: Basic, Standard and Advanced. Selling prices, unit costs and monthly sales are as follows:

	<i>Basic</i>	<i>Standard</i>	<i>Advanced</i>
	£	£	£
Selling price	50	100	135
Variable cost	30	50	65
Monthly contracts sold	750	450	300

Calculate the average contribution to sales ratio of the company

- (i) based on the sales mix stated above; and
 (ii) if the total number of monthly contracts sold remains the same, but equal numbers of each contract are sold.

(4 marks)

Workings

	<i>Basic</i>	<i>Standard</i>	<i>Advanced</i>	<i>Total</i>
	£000	£000	£000	£000
<i>Previous ratio:</i>				
Sales	37.5	45	40.5	123
Contribution	15	22.5	21	58.5

C/S ratio = 47.6%

<i>New ratio:</i>				
Sales	25	50	67.5	142.5
Contribution	10	25	35	70

C/S ratio = 49.1%

Section B – 30 marks

ANSWER ALL THREE QUESTIONS

Question 2

Explain

- (i) the components of the extended value chain; and (3 marks)
- (ii) how each of the components may be applied by AVN. (7 marks)

(Total for Question Two = 10 marks)

Rationale

Question Two requires candidates to explain the extended Value Chain and how it may be applied by the company in the scenario. The question addresses the learning *outcome* “*explain the concept of the value chain and discuss the management of contribution/profit generated throughout the chain*”.

Suggested Approach

Read the scenario carefully to recognise the industry in which AVN operates. Apply your knowledge of the extended value chain to the scenario provided.

Marking Guide

Marks

Brief explanation of the value chain and its components	3
Apply each component to AVN:	
Suppliers	2
Customers	2
Internal components	3

Examiner’s Comments

A significant number of candidates did not attempt this question, or made very poor attempts. In part (i) many candidates drew a diagram of the Value Chain with no accompanying notes. The question asked for candidates to ‘explain’ the Value Chain.

Common Errors

1. Not relating the answer to the scenario in the question
2. Confusing ‘The Value Chain’ with Value Analysis
3. Developing answers based solely on J.I.T.
4. Not including the important role of ‘suppliers’ and ‘customers’, although the question specifically described this point.

Question 3

- (a) Complete the cash flow statement for each of the remaining two stages of the product's life cycle. **Do not copy the Introduction and Growth stages in your answer.** Ignore the time value of money. (5 marks)
- (b) Explain, using your answer to (a) above and the data provided, the possible reasons for the changes in costs and selling prices during the life cycle of the product. (5 marks)

(Total for Question Three = 10 marks)

Rationale

Question Three requires candidates to complete a cash flow statement based upon the data provided for the life-cycle of a product. Candidates are then required to explain the possible reasons for the changes in costs and selling prices. This question addresses the learning outcome *"explain the concept of life cycle costing and how life cycle costs interact with marketing strategies at each stage of the life cycle"*.

Suggested Approach

Read the question carefully and interpret the data by determining how the statement for the first two stages of the product's life cycle have been prepared.

Identify the month in which the monthly sales demand begins to fall as this is the start of the decline phase.

Prepare a statement showing the results of the maturity and decline phases of the product life cycle. Explain the reasons for the changes that have occurred in this product's life cycle.

Marking Guide

	Marks
Number of sales units	2
Corresponding selling price	1
Corresponding unit variable cost	1
Corresponding unit contribution, total contributions and cumulative cash flows	1
Reasons for reductions in cost	2
Reasons for reductions in selling price	3

Examiner's Comments

A template was included within the question, which was aimed at assisting candidates to construct their answers. On many occasions this format was not followed.

Many students were not able to identify the sales that related to the maturity and decline phases of the life cycle, which seriously reduced the marks that could be awarded.

Part (b) was generally well answered.

Common Errors

1. Not referring to the scenario and simply giving general answers that related to a typical product life cycle.
2. Confusing the word 'cost' with 'price'.
3. Giving details of a penetration pricing approach although this was not the approach adopted by the company in question.
4. Putting forward answers that implied that high marketing and R & D costs were a reason for a high variable cost per unit.

Question 4

You are required to interpret the diagram and explain how it illustrates issues that the operational managers should consider when making decisions. (*Note: your answer must include explanations of the Sales Revenue, Total Cost and Fixed Cost lines, and the significance of each of the activity levels labelled A, B, C, D).*

(10 marks)

Rationale

Question Four requires candidates to interpret a breakeven chart and explain how it illustrates issues that operational managers should consider when making decisions. This question addresses the learning outcome “*discuss the usefulness of dividing costs into variable and fixed components in the context of short-term decision making*”.

Suggested Approach

Study the diagram carefully to identify the changes in the slopes of the lines representing sales revenue, total cost and fixed cost and how these changes affect the interpretation of the gaps between these lines (representing profit and variable cost respectively).

Describe the changes in the lines and their possible causes with particular emphasis on the implications of these changes for management decision making.

Marking Guide

	Marks
Explanation of fixed costs	2
Explanation of variable costs	2
Explanation of sales	2
Explain point of profit maximisation	1
Explain activity level A	1
Explain activity level B	0.5
Explain activity level C	1
Explain activity level D	0.5
Explain relevance to decision making	2
	Max 10 marks

Examiner’s Comments

Many candidates demonstrated a complete lack of understanding of a typical breakeven chart. This is a topic that is covered in paper C1 (Fundamentals of Management Accounting) and should have presented no undue problems to a well-prepared CIMA student. In many cases the answers were poorly presented and were far too general in nature.

Common Errors

1. Not relating the answer to the graph.
2. Giving general answers that related to product life cycle costing and did not relate to the question.
3. Structuring answers that believed the four activity levels were four different products.
4. Not knowing that a change in the slope of the cost line and the revenue line denoted a change in the unit variable cost or the unit selling price. The change in slope does not relate to activity levels.

Section C – 50 marks

ANSWER TWO QUESTIONS OUT OF THREE

Question 5

- (a) Given the Managing Director's concern about KL's approach to setting selling prices, discuss the advantages and disadvantages of marginal cost plus pricing **AND** total cost plus pricing. (6 marks)
- (b) Calculate the full cost per unit of each product using KL's current method of absorption costing. (4 marks)
- (c) Calculate the full cost per unit of each product using Activity Based Costing. (8 marks)
- (d) Explain how Activity Based Costing could provide information that would be relevant to the management team when it is making decisions about how to improve KL's profitability. (7 marks)

(Total for Question Five = 25 marks)

Rationale

Question Five requires candidates to discuss the advantages and disadvantages of marginal cost plus pricing and total cost plus pricing in part (a). In the remainder of the question candidates were required to calculate the unit cost of the company's products using traditional absorption costing and activity based costing and to explain how the use of activity based costing could provide information that would be relevant to the company's management team when they are making decisions to improve the company's profitability. This question addresses the learning outcomes "explain the particular issues that arise in pricing decisions and the conflict between marginal cost principles and the need for full recovery of all costs incurred" and "apply the techniques of activity based management in identifying cost drivers/activities and explain how process re-engineering can be used to eliminate non-value adding activities and reduce activity costs".

Suggested Approach

Briefly explain the principles of absorption costing and marginal costing and how they may both be used as the basis for cost plus pricing. Discuss the advantages and disadvantages of cost plus pricing using these methods.

Calculate the unit cost of each product using traditional absorption costing and using ABC and compare the results.

Explain how ABC may improve KL's profitability by controlling costs and by encouraging decisions that reduce the activities that cause costs to be incurred.

Marking Guide

	Marks
(a)	
Briefly explain absorption costing and marginal costing	1
Explain and justify the use of cost plus pricing	1

Explain advantages and disadvantages of :	
Absorption based cost plus pricing	2
Marginal based cost plus pricing	2
(b)	
Calculate the absorption rate	2
Use the direct costs provided	1
Calculate the overhead cost per unit	1
(c)	
Calculate the cost driver rates	6
Calculate the overhead cost of each product by applying cost driver rates	2
(d)	
Discuss the similarities and differences between unit costs	2
Explain how using ABC can lead to cost savings	3
Explain how ABC can lead to better cost control	3
	Max 7 marks

Examiner's Comments

Part (a) was poorly answered and demonstrated that many candidates simply do not understand a most fundamental technique i.e. the absorption of fixed production overheads.

Part (b) and (c) were generally well answered but candidates must be able to complete numerical tasks and then explain the results. It was apparent from many answers that candidates were unable to explain the principles of activity based costing.

This is a worry and a matter for concern because Management Accounting is not assessed further at the Strategic Level and candidates need to be confident in their ability to apply such knowledge in practice.

Common Errors

1. Demonstrating a complete lack of understanding of the word 'absorption'.
2. Not answering the question (part a) and simply explaining that sales less marginal costs equals contribution.
3. In part (b) calculating an absorption rate per unit, as opposed to the requirement of the question, which was 'per labour hour'.
4. In part (d) describing how ABC could be introduced to the company as opposed to responding to the question which asked how ABC could provide information that could improve profitability.

Question 6

- (a) Using expected values as the basis of your decision, advise the theatre management whether it is financially worthwhile to engage MS for the concert.
 (5 marks)
- (b) Prepare a two-way data table to show the profit values that could occur from deciding to engage MS for the concert.
 (5 marks)
- (c) Explain, using the probabilities provided and your answer to (b) above, how the two-way data table can be used by the theatre management to evaluate the financial risks of the concert, including the probability of making a profit.
 (9 marks)
- (d) Calculate the maximum price that the theatre management should agree to pay for perfect information relating to the size of the audience and the level of contribution from confectionery sales.
 (6 marks)

(Total for Question Six = 25 marks)

Rationale

Question Six requires candidates to prepare calculations by applying probabilities to the data provided. They are required to interpret the results to advise a theatre as to the financial risks associated with a proposed concert and to determine the maximum price that should be paid by the theatre company for perfect information relating to the event. This question addresses the learning outcomes “analyse risk and uncertainty by calculating expected values and standard deviations together with probability tables and histograms” and “prepare expected value tables and ascertain the value of information”.

Suggested Approach

Use expected values to determine the size of the audience and the expected value of contribution in order to advise the theatre management whether or not to engage MS for the concert.
 Determine the nine possible combinations of audience size and confectionery contribution that could occur and present the results in a two way data table.
 Determine the probabilities of each of the nine outcomes and explain how the table can be used with the probabilities by the theatre management.
 Determine the actions of the theatre management if they had perfect information regarding the size of the audience and the confectionery contribution, and hence determine the value of that perfect information.

Marking Guide

	Marks
(a)	
Calculate expected income	3
Calculate expected gain and advise theatre management	2

(b)	
Construct an appropriate table with row and column headings	2
Enter data values	3
(c)	
Comments based on the table:	
Probability of profit or loss	2
Range of possible outcomes	2
Discussion of expected value, the skewed distribution and risk	5
(d)	
Calculate the expected value with perfect information	5
Determine the value of perfect information	1

Examiner's Comments

This was the least popular of the option questions, perhaps not being considered as a mainstream topic by candidates or providers of tuition for the paper. In many cases correct figures were not supported by meaningful explanations.

Common Errors

In part (b) producing a two-way table that only considered ticket sales and excluded confectionery sales.

In part (b) not producing a two-way table and simply listing all the contribution values.

In part (c) providing poor explanations of the two-way table, incorrect calculations of joint probabilities, and poor attempts at calculating the probability of making a profit.

In part (d) not understanding what was required.

Question 7

- (a) Advise JK plc whether the investment is financially worthwhile. (17 marks)
- (b) Calculate the Internal Rate of Return of the investment. (3 marks)
- (c) Define and contrast (i) the real rate of return and (ii) the money rate of return, and explain how they would be used when calculating the net present value of a project's cash flows. (5 marks)

(Total for Question Seven = 25 marks)

Rationale

Question Seven requires candidates to apply the net present value technique to the data provided to determine the financial viability of a proposed investment. Then in part (b) candidates are required to determine the Internal Rate of Return of the investment and in part (c) to define and contrast the real and money rates of return and explain how they would be used when calculating the net present value of the cash flows from a project. This question addresses the learning outcomes “*calculate project cash flows, accounting for tax and inflation, and apply perpetuities to derive end of project value where appropriate*” and “*evaluate project proposals using the techniques of investment appraisal*”.

Suggested Approach

Read the scenario carefully to determine the start date of the investment and how inflation is expected to change the costs and revenues during the life of the investment.
 Determine the values of sales and variable costs for each year taking account of volume changes and the effects of inflation.
 Determine the value of fixed costs for each year taking account of the effects of inflation.
 Calculate the tax savings arising from the investment, and the years in which they will be received.
 Calculate the tax arising on the operating profits and the years in which such tax will be payable.
 Determine the net present value of the investment and advise the company.
 Calculate the Internal Rate of Return of the investment by comparing its NPV at different discount rates.
 Define the real and money rate of return.
 Explain how each of them may be used when evaluating an investment project.

Marking Guide

	Marks
(a)	
Calculate sales values	1
Calculate variable cost values	2
Calculate fixed cost values	3
Correctly inflate values	3
Tax calculations	4
Capital cashflows	1
Calculate NPV and advise	3
(b)	
Select an appropriate discount rate	1
Calculate IRR	2
(c)	
Explain the difference between real and money rates	2
Explain how they are used	3

Examiner's Comments

A good attempt was made by most candidates at a question that was technically more demanding than most other questions on the paper. Perhaps this is because this question conformed to a traditional pattern, which required the application of well-known and previously tested procedures.

Common Errors

1. Ignoring the fixed costs
2. Not inflating the fixed costs
3. Calculating taxation based on the contribution
4. Supplying poorly presented answers
5. Supplying poor references to workings
6. Applying inflation incorrectly
7. Demonstrating an inability to distinguish between the real rate of return and the money rate of return.