

General Comments

Overall the performance reflected an improvement compared with the May 2011 examination results. The paper examined topics that have been tested in several recent papers which greatly advantaged candidates who had taken the time to read through and practise past papers. These topics included the balanced scorecard, the learning curve, value analysis and kaizen costing.

The papers submitted by many candidates were good, but far too many scripts displayed well documented weaknesses, including poor handwriting, no signs of an answer plan and failing to answer the question. The incorrect interpretation of the verbs used was again in evidence, particularly the word “explain” which many candidates interpreted incorrectly as “list”.

It is also necessary to highlight once again that a number of answers were so poorly presented that markers were simply unable to award marks. In particular, the workings relating to quantitative questions were not referred to or were not shown at all.

The layout of answers to discursive questions was generally good, but poor habits were once again in evidence including writing in the margins, writing in red and not indicating that part of an answer appeared several pages later in the answer book.

When reviewing the scripts it is apparent that many candidates had not:

- studied the entire syllabus
- practised using past P2 questions
- learned from the content of previous PEGs
- remedied any knowledge gaps from previous subjects (C01 and P1).

The following points should be noted by candidates when reflecting on the paper just taken, and when preparing for future CIMA examinations. The list is reproduced from previous PEGs, which unfortunately confirms that the same problems still exist.

1. Due to the progressive nature of the Management Accounting Pillar candidates sitting the P2 examination are advised to closely examine the syllabi of the Certificate Level subjects, particularly C01, and the P1 paper to ensure they have a thorough understanding of all the topics covered in those papers. Any identified knowledge gap must be addressed.
2. Candidates should always practise time management and relate the time they expend on each question to the marks available. A simple approach is to allow 1.8 minutes for one mark. This will avoid candidates failing to complete the paper.
3. Candidates are advised to read *Financial Management* magazine and *Velocity* e-newsletter, especially articles that relate to technical issues associated with the P2 syllabus.
4. Candidates should study and revise the entire syllabus and ignore suggestions put forward in accounting journals which suggest the topics ‘likely’ to be examined.
5. Candidates are advised to understand the rubric of the paper and plan their attempts accordingly.
6. Candidates should make full use of the 20 minutes allowed for reading and planning.
7. Answers to discursive questions should relate to the scenario in the question. On many occasions general answers are submitted that attract few marks.
8. In preparing for the exam, candidates are advised to practise regularly using past CIMA questions, comparing their answers to the examiner’s suggested answers. The effort exerted undertaking this task will allow candidates to measure their own progress. Candidates will

also gain an understanding of the correct layout for quantitative answers and of the depth of answers required to discursive questions.

9. Candidates are advised to present answers in a clear and logical fashion e.g. clear and legible handwriting and workings clearly referred to.

A number of common faults also need attention:

1. Many candidates expend valuable time in writing out the question at the start of their answer. This is not necessary.
2. Many candidates include facts stated in the question within their answer as if they are putting forward new information.
3. If a question asks for, say, three items to be put forward, do not waste valuable time in putting forward more items. Only three items will be marked.
4. Clearly indicate to the marker if part of the answer to a question appears later in the answer booklet (e.g. “see page 21 for part b”)

Section A – 50 marks

ANSWER ALL FIVE QUESTIONS IN THIS SECTION. EACH QUESTION IS WORTH 10 MARKS. YOU SHOULD SHOW YOUR WORKINGS AS MARKS ARE AVAILABLE FOR THE METHOD YOU USE.

Question 1

Calculate

- (a) the cumulative average time per batch for the first 64 batches (2 marks)
- (b) the time taken for the 64th batch (3 marks)
- (c) the average selling price of the final 1,000 units that will allow the company to earn a total profit of \$100,000 from the product (5 marks)

(Total for Question One = 10 marks)

Note: The learning index for an 85% learning curve is -0.2345

Ignore the time value of money.

(Total for Question One = 10 marks)

Rationale

The question examines candidates' knowledge and understanding of the learning curve and how it links with target costing. The learning outcomes tested are B1(e) *apply learning curves to estimate time and cost for new products and services* and A1(c) *discuss 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.*

Suggested Approach

Carefully read the data provided to identify the time for the first batch and the rate of learning. Use the learning curve formula to calculate the cumulative average time per batch for the first 64 batches.
 Calculate the total time for 64 batches and the total time for 63 batches.
 Calculate the time for the 64th batch.
 Calculate the total revenue from the first 9,000 units sold.
 Calculate the total costs of producing 10,000 units.
 Calculate the sales revenue required from the final 1,000 units sold to achieve the profit target of \$100,000 and therefore calculate the average selling price per unit of the final 1,000 units.

Marking Guide

Marks

(a)	
Calculation of average time per batch for 64 batches	2
(b)	
Calculation of total time for 64 batches	0.5
Calculation of average time for 63 batches	1
Calculation of total time for 63 batches	1
Calculation of time for 64 th batch	0.5

(c)	
Calculation of sales revenue	1
Calculation of variable costs – non labour	0.5
Calculation of total time	0.5
Calculation of total direct labour cost	0.5
Fixed cost	0.5
Calculation of revenue required	1
Calculation of revised selling price	1
Maximum marks awarded	10 marks
Examiner's Comments	
<p>The attempts at parts (a) and (b) were generally good with most candidates gaining the marks available.</p> <p>The attempts at part (c) were generally poor. It was obvious from the answers that many candidates did not know how to tackle this part of the question. There were several ways to answer this question but whichever approach was adopted the workings should have been clearly laid out, rather than presenting numerous figures with no labels or titles.</p> <p>The main fault with many answers to part (c) related to the final selling price. The original selling price for this unit was \$124 and it was now entering its decline stage, meaning that the selling price would reduce. Many answers gave a selling price of \$7,878, £2,227 and \$1,844. Candidates are advised to check their answers for sense and clearly indicate to a marker if the candidate knows that it cannot be correct.</p> <p><i>Common Errors</i></p> <ol style="list-style-type: none"> 1. putting forward answers that were not sensible in the context of the data in the question (part c) 2. unclear workings 3. figures shown with no descriptions or titles 4. poor answer layouts 	

Question 2

(a) **Explain** the principles of Kaizen Costing. (4 marks)

(b) **Discuss** how Kaizen Costing conflicts with SF's current performance reporting procedures. (6 marks)

(Total for Question Two = 10 marks)

Rationale

The question examines candidates' knowledge of Kaizen Costing and performance reporting. The learning outcomes tested are B1(c) *explain the concepts of continuous improvement and Kaizen costing that are central to total quality management* and C2(c) *evaluate performance using fixed and flexible budget reports*.

Suggested Approach

Explain the principles of Kaizen Costing.
 Carefully read the scenario and determine the company's current performance reporting procedures.
 Discuss how the use of Kaizen Costing conflicts with these procedures.

Marking Guide

Marks

(a) 1 mark per point. Points could include: **Max 4 marks**

- Continuous review of systems and procedures
- Small incremental cost savings
- Used in the production phase
- Employee empowerment

(b) 1 mark per point. Points could include: **Max 6 marks**

- Standard costing & variance analysis are used to measure performance
- Standards are set at the start of the year as targets for the year
- Annual targets do not allow for improvements
- Kaizen Costing encourages improvements
- Kaizen Costing uses a moving target
- A moving target conflicts with having a static target
- Managers may be confused by moving targets
- Trend analysis is difficult with a moving target

Maximum marks awarded

10 marks

Examiner's Comments

The answers to part (a) were generally good but a significant number of candidates stated that Kaizen Costing was simply another name for Target Costing and explained the characteristics of Target Costing. Other candidates could not correctly describe Kaizen Costing e.g. "Kaizen Costing is continuous improvement". A continuous improvement of what? This question should have generated easy marks for a well prepared candidate.

The answers to part (b) were generally poor. The main problem was that candidates did not discuss the "conflicts" between standard costing and Kaizen Costing, but simply gave separate lists of the

characteristics of the two systems.

Another common fault related to the incorrect interpretation of the question. The question stated that the “directors agree a set of standard costs”, but many candidates interpreted this as “the directors calculated the standards and did not involve anyone else”. The discussions that followed were therefore incorrect.

Common Errors

1. characteristics of Kaizen Costing not fully understood
2. unclear statements submitted (part a)
3. the verb “discuss” not fully understood (part b)
4. repetition of points (part b)

Footnote: a detailed article on Kaizen Costing was included in the April 2011 issue of *Financial Management*.

Question 3

Discuss how LCG could improve its sales volumes, costs and profits by using (i) value analysis and (ii) functional cost analysis.

(Total for Question Three = 10 marks)

Rationale

The question examines candidates' knowledge of value analysis and functional cost analysis. The learning outcomes tested are B1(a) *compare and contrast value analysis and functional cost analysis* and B1(g) *explain how process re-engineering can be used to eliminate non-value adding activities and reduce activity costs*.

Suggested Approach

Explain value analysis and how it operates.
 Explain functional cost analysis and how it operates.
 Explain how the company could improve its sales volumes, costs and profits using these techniques.

Marking Guide

Up to two marks per well explained point. Points could include:

- Explain value analysis
- Explain functional cost analysis
- Explain the difference in their focus
- Case specific requirements (unit cost reduction; maintain quality; reduce selling price)
- Case specific conclusion (use value v esteem value)

Marks
Max 10
marks

Maximum marks awarded

10 marks

Examiner's Comments

The attempts at this question were generally disappointing. The majority of candidates could not clearly explain both techniques and submitted lengthy general answers that simply stated that if a selling price is reduced the volume sold will increase.

For part (a) a significant number of candidates simply changed the question by stating that value analysis was simply another name for the value chain and then wrote all they knew about the value chain.

For part (b) many candidates believed functional analysis referred to the functions of an organisation such as marketing, distribution, etc. and discussed how costs could be reduced in these areas.

Very few candidates attempted to answer the question and explain how LCG could use the two techniques to improve its sales volumes, costs and profits.

Common Errors

1. poorly constructed answers with no evidence of an answer plan
2. incorrectly believing that value analysis is another name for the value chain
3. interpreting the word functional to mean departments within an organisation
4. submitting general/generic answers that could have applied to almost any accounting technique
5. describing the process relating to each technique; this used valuable time and was not required

Footnote: a detailed article on value analysis and functional analysis was included in the July/August issue of *Financial Management*.

Question 4

Illustrate the differences between feedforward control and feedback control using the above information about WX's cash budget.

(Total for Question Four = 10 marks)

Rationale

The question examines candidates' understanding of feedforward control and feedback control in the context of a cash budget. The learning outcome tested is C1(a) *explain the concepts of feedback and feed-forward control and their application in the use of budgets for planning and control.*

Suggested Approach

Carefully read the information provided to identify the relevant data.
 Use the data provided to illustrate the differences between these forms of control.

Marking Guide

Marks

Up to two marks per well explained point. Points could include:

Max 10 marks

- Feed-forward is comparison of draft plans with objectives
- A draft budget will be prepared to show the expected monthly cash balances
- The expected balances are compared with the objectives
- Budget may need to be revised / objectives changed
- Feedback is comparison of actual results with budget
- Variance may be adverse or favourable
- Feed-forward occurs in the setting stage, feedback occurs during the year

Maximum marks awarded

10 marks

Examiner's Comments

This question was poorly answered. This is extremely disappointing because aspects of budgetary control are so important in relation to "control". Very few candidates were able to define or explain feedforward or feedback and came up with a variety of incorrect interpretations for both techniques. For example, some candidates believed that feedforward control is simply another name for a rolling budget, a flexed budget or a top-down budget, whereas other candidates believed it relates directly to target costing.

Another misconception concerned variance analysis, in that when describing feedback control, many candidates were under the impression that variances are only calculated at the end of the budget year, rather than month by month.

There also appears to be a complete misunderstanding of certain words, in particular a plan, a forecast, an objective and a target.

Common Errors

1. poorly constructed answers
2. confusing feedforward and feedback controls with a variety of other techniques

3. not understanding how variances are derived on a monthly basis
4. simply restating the scenario set out in the question as if the candidate was offering something completely new.

Question 5

- (a) **Explain** the concepts of the Balanced Scorecard and how it could be used by the airline company. (6 marks)
- (b) **Explain TWO** non-financial measures that the airline company could use to monitor its performance. (4 marks)
- (Total for Question Five = 10 marks)*

Rationale

The question examines candidates' knowledge of the Balanced Scorecard in the context of an airline company. The learning outcome tested is C3(c) *compare and contrast traditional approaches to budgeting with recommendations based on the balanced scorecard.*

Suggested Approach

Carefully read the scenario provided to identify the relevant information. Use the information provided to explain the Balanced Scorecard and how it could be used by the airline company, including an explanation of two non-financial measures that the airline company could use.

Marking Guide

Marks

(a)		
Performance should not be measured on financial measures alone; other indicators are relevant to success		1
Balanced scorecard contains a number of non-financial segments (include list / examples)		up to 3
Examples of relevance of balanced scorecard to airline company		up to 4
		max 6 marks
(b)		
Each measure (must be relevant to an airline company) (identify =1; explain = 1)		up to 2 marks per measure

Maximum marks awarded

10 marks

Examiner's Comments

Generally this question was well answered although many marks were not gained, or could not be awarded, due to candidates not strictly answering the question asked. Candidates needed to demonstrate to the marker that they knew that the balanced scorecard was a performance measurement tool, and then relate their answers to the scenario in the question. Far too many candidates simply described each perspective and then included numerous performance measures, rather than explaining how the balanced scorecard, if used effectively, could assist the airline company.

The most noticeable problem in part (b) was that many candidates gave up to six non-financial measures whereas only two were requested. Many of the measures put forward gained no marks as they were either too vague or could not be measured e.g. "Conduct a customer survey to see if they are happy". "Organise plenty of staff training so they do not leave". Performance measures must be measurable.

Common Errors

1. failing to describe the balance scorecard
2. naming the four perspectives incorrectly
3. not relating the answer to the scenario (part a)
4. providing more performance measures than were required
5. putting forward measures that would be difficult to measure

SECTION B – 50 MARKS

ANSWER *BOTH* QUESTIONS IN THIS SECTION. EACH QUESTION IS WORTH 25 MARKS. YOU SHOULD SHOW YOUR WORKINGS AS MARKS ARE AVAILABLE FOR THE METHOD YOU USE.

Question 6

- (a) **Calculate** the relevant cost of building the new engine.

You should present your answer in a schedule that clearly shows the relevant cost value for each of the items identified above. You should also explain each relevant cost value you have included in your schedule and why the values you have excluded are not relevant.

(13 marks)

- (b) HY, the company that is to supply RFT with the components that are required for this contract, is another company in the same group as RFT. Each component is being transferred to RFT taking account of HY's opportunity cost of the component. The variable cost that will be incurred by HY is \$28 per component.

Discuss the factors that would be considered by HY to determine the opportunity cost of the component.

(5 marks)

- (c) When there is no external market for the item being supplied between divisions of a company the transfer price is often based on the supplying division's cost.

- (i) **Illustrate**, using a numerical example, the performance measurement problem that can arise when using a transfer price based on actual cost.

(3 marks)

- (ii) **Explain** how using standard costs rather than actual costs as the basis of the transfer price would solve the problem identified in (i) above.

(4 marks)

(Total for Question Six = 25 marks)

Rationale

The question examines candidates' knowledge and understanding of relevant costs in the context of a special order decision. It then tests candidates' knowledge of transfer pricing policies and their effect on performance measurement. The learning outcomes tested are A1(b) *discuss the possible conflicts between cost accounting for profit reporting and stock valuation and information required for decision making*, A1(a) *discuss the principles of decision-making, including the identification of relevant cash flows and their use alongside non quantifiable factors in making rounded judgements* and D3(c) *discuss the likely consequences of different approaches to transfer pricing for divisional decision making, divisional and group profitability, the motivation of divisional management and the autonomy of individual divisions*.

Suggested Approach

Carefully read the scenario to identify the resources required and their relevant costs.

Prepare a statement that uses relevant costing principles to show the relevant costs of the contract.

Explain each relevant cost that has been included in the statement and explain why the values you have excluded are not relevant.

Discuss the factors to be considered when determining the opportunity cost of a component.

Illustrate the performance measurement problem that can arise when using a transfer price based on actual cost.
 Explain how using standard costs rather than actual costs would solve this problem.

Marking Guide	Marks
(a)	
Production director:	
Value = nil	1
It is a past cost	1
Material A:	
Value = \$1,375	1
Replacement cost - it is in regular use	1
Material B:	
Value = \$360	1
Purchase cost because it needs to be bought	1
Minimum order quantity is relevant because there is no other use for the material	1
Components:	
Value = \$3,000	1
Future expenditure to be incurred is relevant	
Direct labour:	
Value = \$2,100	1
Spare capacity, so relevant cost relates to 160 hours	1
Cheaper of two options	Up to 3 (calc = 2; decision =1)
Machine hours:	
Value = \$175	1
Hire cost is sunk	1
Running cost is incremental	1
Fixed overhead:	
Value = nil	1
Not incremental	1
	Max 13 marks
(b)	
Identify two factors: capacity & unsatisfied demand	2
Explain capacity issue (spare = variable cost; full = opportunity cost)	up to 2
Explain unsatisfied demand issue (i.e. opportunity cost)	up to 2
	Max 5 marks

(c) (i)	
Concept of cost plus	1
Example illustrating the effect of supplier inefficiency	Up to 2
(ii)	
Standard cost must be fair	1
Illustrate the use of the standard cost to solve the problem	Up to 2
Problem of agreeing the standard cost	1
Problem of standard cost becoming out of date	Up to 2
	Max 7 marks
Maximum marks awarded	25 marks
Examiner's Comments	
Part (a) was well answered by most candidates.	
Parts (b) and (c) were poorly answered with most of the answers demonstrating that the requirements were not fully understood.	
<i>Common Errors</i>	
<ol style="list-style-type: none"> 1. In part (a), losing easy marks by not "explaining" why a figure had been included or excluded: for example "sunk" written at the side of a figure is not an explanation; "because it is relevant" is also not accepted as an explanation for a figure. 2. not relating the answer to the scenario in the question (part b) 3. failing to identify the two important factors i.e. capacity and unsatisfied demand (part b) 4. not including a numerical example to support an explanation (part (c)(i)) 5. submitting answers that were disproportionate to the marks available (part (c)(i) awarded three marks) 6. not understanding the question. The question stated that the transfer price was <i>based on</i> actual cost, whereas many candidates assumed that the transfer price was the actual variable cost, or the actual full cost. A mark-up could have been included. 7. failing to link part (c)(i) to (c)(ii) 	

Question 7

(a)

- (i) **Calculate** the Return on Capital Employed (ROCE) (using average capital employed) achieved by each division during the years ended 31 May 2010 and 31 May 2011. (7 marks)
- (ii) **Calculate** (1) the asset turnover and (2) the profit/sales % achieved by each division during the years ended 31 May 2010 and 31 May 2011. (4 marks)
- (iii) **Discuss** the relative performances of the two divisions. (4 marks)

(b)

Prepare a cost of quality report for SHG that shows its costs of quality (using appropriate headings) for the year ended 31 May 2011. (10 marks)

(Total for Question Seven = 25 marks)

Rationale

The question examines candidates' understanding of performance ratios and quality costs. The learning outcomes tested are D1(a) *discuss the use of cost, revenue, profit and investment centres in devising organisation structure and in management control*, D2(c) *discuss alternative measures of performance for responsibility centres* and B1(d) *prepare cost of quality reports*.

Suggested Approach

Carefully read the scenario to identify the relevant data.
 Calculate the profit of each division for each of the two years.
 Calculate the required ratios for each division for each of the two years.
 Discuss the relative performance of the two divisions.
 Carefully read the quality data.
 Prepare a quality report for the company.

Marking Guide

Marks

(a) (i)	
Calculation of annual depreciation charges for each division	3
Calculation of divisional profits for each division for each year	1
Calculation of each division's average capital employed for each year	2
Calculation of ROCE for each division for each year	1
(a) (ii)	
Calculate each ratio for each division for each year	4

(a) (iii)	
Achieved / not achieved target	1
Age of assets and the effect on capital employed values	2
Unfair target	1
Newer equipment may earn better yields	2
Improvement is a function of depreciation	2
	Max 4 marks
(b)	
Use of quality cost headings	4
Use of sub totals and a total	1
Quality costs	4
Inclusion of opportunity costs	1
Maximum marks awarded	25 marks
Examiner's Comments	
<p>The attempts at part (a) were extremely poor. Most candidates were not aware that the three ratios/percentages being requested in a(i) and a(ii) were interlinked and formed part of the DuPont model of measurement. The figures triangulated, meaning that the figures used for capital employed and profit in (a)(i) needed to be the same as those used in (a)(ii)</p> <p>Most candidates simply used the cash flow as the profit figure and did not attempt to calculate the depreciation figure that was needed to adjust the cash flow to a profit figure. Some candidates used the turnover as the profit figure which resulted in answers that were not realistic.</p> <p>The 'own figure' principle was applied to (a)(ii) which meant that incorrect answers could still be awarded marks for method. Nevertheless candidates should have noticed that their answers were meaningless, but very few candidates seemed to be aware that a profit margin of 200% was not realistic.</p> <p>Attempts to discuss the relative performance of the two divisions were poor. Very few candidates noted that the age of the assets and the levels of depreciation for the two divisions was a major factor when comparing the financial results of the two divisions.</p> <p>Most candidates attained a good mark for part (b) but many easy marks could not be awarded due to the poor layout of reports. It was also noticeable that many candidates did not know into which category the individual items should be placed.</p> <p><i>Common Errors</i></p> <p>Part (a)</p> <ol style="list-style-type: none"> not aware that the three ratios/percentages were interrelated using different capital employed and profit figures in each ratio not calculating depreciation figures not using the depreciation figure to convert the cash flows to profits using year-end capital employed figures whereas the question indicated that the average capital employed should be used putting forward meaningless percentages and turnover figures extremely poor layout of answers making it difficult for the markers to follow and possibly award marks putting forward weak explanations to support the figures, and giving no reasons why the figures were good/poor in part (a)(iii) <p>Part (b)</p> <ol style="list-style-type: none"> presenting messy reports that were difficult to follow placing individual items under the incorrect heading failing to show sub-totals and an overall total in the report 	