General Comments

The March 2011 examination closely resembled the previous examinations under the current syllabus, in terms of syllabus coverage as well as in depth of questions. The paper tested important topics including the learning curve, limiting factors, budgetary control, modern business techniques (JIT), Total Quality Management (TQM) and divisional performance measurement.

Candidates should note the inclusion of variance analysis in this paper, in question one and in a full question (question four). This clearly demonstrates the progressive nature of this syllabus and emphasises the point made on several previous occasions that topics covered in the Certificate level subjects, particularly C01, and P1 could be relevant in the assessment of P2. Therefore these topics should not be forgotten, but should be revisited when studying P2. This is even more important for candidates who may have been exempted from subjects at a lower level due to a previous qualification. It is incumbent on these candidates to ensure they study the syllabi of previous papers to identify any ‘knowledge gap’. This group of candidates is also advised to undertake a thorough review of past exam papers to appreciate the type of questions they can expect to see in a CIMA paper.

The rubric of this paper also seems to be causing problems for some candidates, in that questions in both sections of the paper are compulsory. It is therefore vital that candidates revise the entire syllabus and do not take the chance that their favourite topics will appear. A review of the exam scripts clearly shows that many candidates were not able to make even the most basic attempt at some of the questions. The advice to candidates is to study and revise the entire syllabus.

In respect to the overall standard, it is disappointing to note that the performance was poor. The answers to several questions submitted by the majority of candidates were below the standard required. Many candidates demonstrated a poor understanding of topics such as variances and limiting factors (progressive items), the learning curve and divisional performance measurement.

It is also disappointing to comment once again that the presentation of answers lacked a professional, well practiced approach. The answers to discursive questions lacked structure, and there was no visible sign of a plan being prepared before the questions were attempted. The end result was a disorganised answer, with points being duplicated in both parts of the answer. The most common fault was that candidates simply did not relate their answers to the scenario in the question, but instead gave a lengthy general answer that could relate to any company/sector. The length of the answers was also often disproportionate to the marks available.

In respect to presentation of many of the answers, two additional issues need to be brought to the attention of candidates. Firstly the quality of handwriting was, in a number of cases, extremely poor and made it difficult for markers to award marks. The second issue relates to the poor quality of answers to numerical questions. Figures were presented with no explanations, workings were not referred to, and the quality of figure-work was extremely poor. In many cases it was not possible to award marks for poorly presented answers.

Finally, it was apparent that many candidates did not understand or appreciate what was required in respect to the verbs used in the questions. Particular attention needs to be paid to this issue and candidates are advised to access the study resources on the cimaglobal website which provide further guidance about the CIMA verb hierarchy. Candidates are also reminded that the verb hierarchy, including definitions for each verb, is published in the inside back cover of each examination paper.

The following points should be noted by candidates when reflecting on the P2 just taken, and especially when preparing for future examinations. The list is virtually the same as the one contained in the previous PEGs, which unfortunately confirms that the same problems still exist.

All the points are important, but particular attention needs to be paid to the first item as this is a major cause of concern.
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 practice time management and relate the time they expend on each question to the marks available. A non-scientific 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 give indications of 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 practice regularly using past CIMA questions, and 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 questions and the depth of answers required for 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.

**There are a number of common faults that 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. When answering a question the effort expended should be related to the marks available.
4. 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.
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

(a) Calculate the actual rate of learning that occurred. (6 marks)

(b) Assuming that the actual rate of learning and the actual labour rate continue throughout the life of the product, calculate the total direct labour cost that the company will incur during the life of the product. (4 marks)

(Total for Question One = 10 marks)

Rationale
This question tests candidates’ knowledge and understanding of variance analysis to interpret the data provided and then requires them to calculate the rate of learning that occurred in part (a) and use this in part (b) to determine the total labour cost of a product. This question addresses the following learning outcome: apply learning curves to estimate time and cost for new products and services.

Suggested Approach
(a) Calculate the standard cost of the actual hours worked by subtracting the direct labour rate variance from the actual labour cost.
Calculate the actual hours by dividing the standard cost by the standard direct labour rate per hour.
Calculate the average time per batch.
Identify the number of times that output has doubled.
Calculate the rate of learning.

(b) Calculate the actual direct labour rate per hour.
Calculate the total direct labour hours using the learning curve formula.
Calculate the direct labour cost.

Marking Guide

<table>
<thead>
<tr>
<th></th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>Calculate actual hours</td>
<td>1</td>
</tr>
<tr>
<td>Calculate average actual hours</td>
<td>2</td>
</tr>
<tr>
<td>Calculate learning %</td>
<td>3</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>Calculate average hours</td>
<td>2</td>
</tr>
<tr>
<td>Calculate labour cost</td>
<td>2</td>
</tr>
<tr>
<td>Maximum marks awarded</td>
<td>10 marks</td>
</tr>
</tbody>
</table>
Examiner's Comments

The attempts for both parts were extremely poor. Part (a) tested the candidates’ ability to use the learning curve formula and to use variances. Candidates had the option to use the traditional learning curve formula, or to use logs, to answer the question. Very few candidates attained the marks that were available, even allowing for the application of the ‘own figure’ rule. Part (b) required candidates to use the output from part (a) (or their own, realistic figures) to calculate a total direct labour cost. A few candidates were able to submit meaningful answers. However, some candidates put forward figures that were simply not in context to the figures in the question. E.g. total labour cost equal to £690,000. Candidates need to check their answers for sense.

The quality of most answers clearly indicates that prior knowledge had not been brought forward, especially relating to variances.

Common Errors

1. unable to use the learning curve formula (parts (a) + (b))
2. unable to use logs (part (a))
3. unable to understand the use of variances (parts (a) + (b))
4. putting forward figures that were not in context to the question (parts (a) + (b))
5. extremely poor layout of answers, with no labelling of figures (parts (a) + (b))
6. unable to distinguish between a favourable variance and an adverse variance (part (a))

Question 2

(a) Explain the concepts of a JIT production system.  

(4 marks)

(b) Explain TWO reasons why the profit of PR may NOT increase as a result of changing to a JIT production system.  

(6 marks)

(Total for Question Two = 10 marks)

Rationale

This question tests candidates' knowledge of JIT production systems and how their use may impact on the profits of an organisation. This question addresses the following learning outcome: evaluate the impacts of just-in-time production, the theory of constraints and total quality management on efficiency, inventory and cost.

Suggested Approach

(a) Explain the concepts of zero finished goods inventory and zero work in progress.

(b) Explain two reasons why profit may not increase as a result of changing to JIT production.
Marking Guide

<table>
<thead>
<tr>
<th>(a)</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero inventory</td>
<td>2</td>
</tr>
<tr>
<td>Work in progress</td>
<td>1</td>
</tr>
<tr>
<td>Finished items</td>
<td>1</td>
</tr>
</tbody>
</table>

| (b)                                |       |
| Each reason (up to 3 marks each)   | 6     |

**Maximum marks awarded** 10 marks

**Examiner’s Comments**

The answers put forward were generally good but several of the problems mentioned earlier were also prominent in this question.

**Common Errors**

The question overall

1. Not relating the answer to the scenario, simply putting forward instead general descriptions that could apply to any company.
2. Writing far too much for the marks available.
3. Poor presentation of answers.
4. Simply providing lists of items rather than giving an explanation i.e. incorrect interpretation of the verb ‘explain’.

**Part (a)**

1. The major fault, and one that expended valuable time, is that many candidates wrote about JIT purchasing whereas the question related to JIT production
2. Not including or mentioning that a JIT production system is based around the principle of zero inventories at all stages of production including finished goods. This is an important issue that specifically needed mentioning.

**Part (b)**

1. Failing to consider items that are costly and would have a negative impact on cash and profits including retraining, recruitment, possible redundancies, new machines, re-layout of the production area, idle time and overtime payments.
Question 3

Discuss the potential advantages and disadvantages to the college of involving the senior staff in the budget preparation process.

(Total for Question Three = 10 marks)

Rationale
This question tests candidates’ understanding of the advantages and disadvantages of involving staff in the budget preparation process. It addresses the following learning outcome: *discuss the impact of budgetary control systems and setting of standard costs on human behaviour.*

Suggested Approach
Read the scenario carefully.
Discuss the advantages and disadvantages of involving the senior staff in the budget preparation process.

<table>
<thead>
<tr>
<th>Marking Guide</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>2</td>
</tr>
<tr>
<td>Better knowledge of courses / delivery</td>
<td>2</td>
</tr>
<tr>
<td>Improve staff morale</td>
<td>2</td>
</tr>
<tr>
<td>Lack knowledge to formulate overall budget</td>
<td>2</td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
</tr>
<tr>
<td>Budgetary slack</td>
<td>2</td>
</tr>
</tbody>
</table>

Maximum marks awarded 10 marks

Examiner’s Comments
This question was extremely well answered with most candidates gaining the marks available.

*Common Errors*

1. Poor presentation of answers.
2. Putting forward lengthy answers that were disproportional to the marks available.
3. Not relating the answer to the scenario, i.e. budgeting in a college setting.
4. Producing lists of items and failing to ‘discuss’ the items i.e. the verb ‘discuss’ in the question was ignored.
Question 4

Prepare a statement for February 2011 that reconciles the budgeted profit of $84,000 with the actual profit of $41,970.

You should show the variances in as much detail as possible given the data provided.

(Total for Question Four = 10 marks)

Rationale

This question tests candidates' knowledge of flexible budgets and of the use of variance analysis to measure performance by requiring candidates to calculate variances and present them in the format of a profit reconciliation statement. This question addresses the following learning outcome: evaluate performance using fixed and flexible budget reports.

Suggested Approach

Read the data provided carefully and calculate the standard price of each resource.
Calculate price and quantity variances for each cost element.
Prepare a statement that shows the variances and reconciles the budget and actual profits.

Marking Guide

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation of actual output (may be implied)</td>
<td>1</td>
</tr>
<tr>
<td>Cost variances (1 mark each)</td>
<td>8</td>
</tr>
<tr>
<td>Format</td>
<td>1</td>
</tr>
</tbody>
</table>

Maximum marks awarded 10 marks

Examiner's Comments

Many candidates failed to attempt this question and most of the answers submitted were extremely poor. Variance analysis is one of the main pillars upon which management accounting is built and questions relating to variances should require the application of basic knowledge from all management accounting candidates. The presentation of answers was extremely poor and figures were put forward without labels or titles. The result was that on many occasions the markers found it impossible to award marks.

Common Errors

1. Poorly presented answers.
2. Figures appearing with no titles/names.
3. Confusion relating to ‘adverse’ or ‘favourable’.
4. Incorrect layout, or no layout at all.
5. Incorrect titles to variances e.g. labour price variance rather than labour rate variance; variable O/H rate variance rather than variable O/H expenditure.
6. Sub-variances for material, labour, variable overheads and fixed overheads not attempted.
7. Calculating cost variances based on sales volume rather than based on production volume.

The answers put forward to this question clearly demonstrate lack of awareness of the point made earlier relating to the progressive nature of the syllabus.
**Question 5**

Explain how Total Quality Management (TQM) would enable ZX to gain competitive advantage in the banking sector.

*(Total for Question Five = 10 marks)*

**Rationale**

This question tests candidates’ understanding of Total Quality Management (TQM) and how it may be used to gain competitive advantage in the banking sector. It addresses the following learning outcome: prepare cost of quality reports.

**Suggested Approach**

Read the scenario carefully.

Explain how the use of TQM could result in competitive advantage for ZX.

<table>
<thead>
<tr>
<th>Marking Guide</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous improvement</td>
<td>2</td>
</tr>
<tr>
<td>Expenditure = Investment</td>
<td>2</td>
</tr>
<tr>
<td>Examples related to ZX</td>
<td>6</td>
</tr>
</tbody>
</table>

**Maximum marks awarded**

<table>
<thead>
<tr>
<th></th>
<th>10 marks</th>
</tr>
</thead>
</table>

**Examiner’s Comment**

This question should have presented candidates with very few problems as TQM is a major topic within the syllabus. Unfortunately a large number of the answers were simply a general essay on TQM, with no mention of or reference to the banking sector. When answering this question candidates needed to explain clearly that TQM is a management philosophy, where quality is placed at the heart of the organisation’s thinking and activities.

The verb ‘explain’ was ignored by candidates and seemed to have been replaced with ‘write all you know about’.

**Common Errors**

1. Ignoring the verb ‘explain’.
2. Not relating TQM to the banking sector.
3. Not answering the question. Some candidates concentrated their attention on interest rates and levels of bank charges which was not required.
4. Writing about topics that were only indirectly related to the modern business environment; rather than concentrating on TQM. Items in this category included Value Analysis, Functional Analysis, ABC and the Balanced Scorecard.
5. Putting forward lengthy answers that were disproportionate to the marks available.
6. Poor presentation of answers.
**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 whether WZ should continue to purchase the component P or whether it should manufacture it internally during the next 10 weeks.  

(11 marks)

(b) Prepare a statement to show the optimum weekly usage of the West factory’s available resources.  

Note: You are NOT required to use linear programming.  

(3 marks)

(c)  

(i) Assuming no other changes, calculate the purchase price of the component P at which your advice in part (a) above would change.  

(4 marks)

(ii) Explain TWO non-financial factors that should be considered before deciding whether or not to manufacture the component internally.  

(4 marks)

(d) If you were to solve part (b) above using linear programming state the following:  

• The objective function  
• The inequality for the material A constraint  
• The inequality for the material B constraint  

(3 marks)

*(Total for Question Six = 25 marks)*

**Rationale**

This question tests candidates’ ability to interpret the data provided to solve a scarce resource problem and measure the sensitivity of the solution to a change in the value of one of the input variables. This question addresses the following learning outcomes: interpret variable/fixed cost analysis in multiple product contexts to break-even analysis and product mix decision making, including circumstances where there are multiple constraints and linear programming methods are needed to identify optimal solutions and discuss the meaning of optimal solutions and how linear programming methods can be employed for profit maximising, revenue maximising and satisfying objectives and analyse the impact of uncertainty and risk on decision models based on CVP analysis.

**Suggested Approach**

(a) 

Calculate the internal manufacturing cost of the component.  

Compare this with the buying price of the component to determine its contribution.  

Calculate the availability of materials A and B compared to the materials required for WZ’s
sales demand and hence determine which material is scarce. Calculate, for each product and the component, the contribution per kg of scarce material. Rank the usage of the scarce material, and determine whether the component should be purchased or manufactured.

(b) Use the rankings determined in (a) to prepare a statement showing the optimum usage of the scarce material.

(c) Compare the contribution per kg for the component with the least best use of the scarce material. Calculate the increase in component contribution (and hence buying price) at which the contribution values would be equal. Explain two non-financial factors to be considered before deciding whether or not to manufacture the component.

(d) Review the resources data and prepare the required equation and inequalities.

<table>
<thead>
<tr>
<th>Marking Guide</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>Internal cost of component</td>
<td>2</td>
</tr>
<tr>
<td>Comparison with buying price</td>
<td>1</td>
</tr>
<tr>
<td>Scarc resource comment</td>
<td>1</td>
</tr>
<tr>
<td>Identify scarce resource</td>
<td>2</td>
</tr>
<tr>
<td>Contribution per kg of B</td>
<td>4</td>
</tr>
<tr>
<td>Recommendation</td>
<td>1</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>Use of resources</td>
<td>3</td>
</tr>
<tr>
<td>(c) (i)</td>
<td></td>
</tr>
<tr>
<td>Compare contributions</td>
<td>2</td>
</tr>
<tr>
<td>Calculate price</td>
<td>2</td>
</tr>
<tr>
<td>(c) (ii)</td>
<td></td>
</tr>
<tr>
<td>Explain factors (2 marks each)</td>
<td>4</td>
</tr>
<tr>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>Equation / inequalities (1 mark each)</td>
<td>3</td>
</tr>
</tbody>
</table>

| Maximum marks awarded                              | 25 marks |
Examiner’s Comments

The answers put forward for parts (a), (b) and (c)(i) were generally poor. The main fault was that candidates failed to show component P alongside the products J, L and M when constructing a table showing the contributions per unit of limiting factor. This was the main thrust of part (a). (Contributions per unit of limiting factor and opportunity cost per unit of limiting factor can be compared.) The presentation of figures for part (a) and (b) was particularly poor with markers being unable to award marks on many occasions due to figures apparently set down at random, and figures appearing with no explanations and with no workings to support them.

Parts (c)(ii) and (d) were generally well answered, but note the comments below.

Common Errors

Part (a)

1. Not fully understanding a make or buy situation in the same context as limiting factors.
2. Poorly presented answers.
3. Figures appearing with no explanations.
4. Answers not clearly identified.
5. No workings to support figures.

Part (b)

1. A repeat of points 2-5 in part (a).
2. Failing to recognise the requirements for the new contract before allocating the remaining quantity of material B.

Part (c)(i)

1. Not appreciating what was required (see part (a) point 1 above).

Part (c)(ii)

1. No common errors to report.

Part (d)

1. Using total quantities in the equations rather than the individual quantity for each product.
Question 7

(a) Calculate the Return on Capital Employed (ROCE) ratios for each of the two companies for the year and analyse these into their secondary ratio components of:

(i) Pre-tax profit %
(ii) Asset Turnover

(3 marks)

(b)

(i) Calculate Z's gross profit margin on its internal sales and compare this to the gross profit margin on its external sales.

(4 marks)

(ii) Discuss the performance of the two companies EXCLUDING the effects of the intra group transactions.

(11 marks)

Due to operational difficulties, the directors of the PZ Group are to impose a transfer pricing policy.

(c) Explain THREE factors that they should consider when setting the transfer pricing policy.

(7 marks)

(Total for Question Seven = 25 marks)

Rationale

This question tests candidates’ ability to interpret the data provided and measure the performance of two companies within a group and the impact that internal transactions and their transfer prices have on the performance of each company. Finally candidates are asked to explain the factors to be considered when setting a transfer pricing policy. This question addresses the following learning outcomes: discuss alternative measures of performance for responsibility centres and 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

(a)
Review the data provided and calculate the ratios for each company.

(b)
Identify the internal sales value by comparing the sum of the company revenue values with the total for the group.
Calculate the gross profit margin on the internal sales.
Eliminate the internal transactions from Z Limited’s results and calculate the gross profit margin on its external sales.
Compare the gross profit margins that you have calculated.
Discuss the performance of the two companies by considering profitability, gearing and asset values.

(c)
Explain three factors that should be considered when setting a transfer pricing policy.
Marking Guide

<table>
<thead>
<tr>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) One mark for each ratio</td>
</tr>
<tr>
<td>(b)(i) Calculation/comparison of margins</td>
</tr>
<tr>
<td>(b) (ii) Eliminate internal transaction</td>
</tr>
<tr>
<td>Revised performance metrics</td>
</tr>
<tr>
<td>Gearing</td>
</tr>
<tr>
<td>Non-current asset values</td>
</tr>
<tr>
<td>(c) Up to 3 marks for each factor</td>
</tr>
</tbody>
</table>

Maximum marks awarded 25 marks

Examiner’s Comments

Overall the answers put forward for part (b) were particularly poor. Parts (a) and (c) were generally well answered. It is a little surprising that this question was poorly answered, especially as a question on the same theme appeared in November 2010. The quality of answers made it obvious that many candidates do not understand this area of the syllabus or had ignored it in their revision programme.

Common Errors

Part (a)

1. Not knowing that pre-tax profit % and the asset turnover are secondary ratios to the ROCE.
2. Using incorrect profit figures in the calculations.
3. Incorrectly showing asset turnover as a percentage (as opposed to “times”).
4. Putting forward unrealistic answers e.g. asset turnover = 699%.

Part (b)(i)

1. Using incorrect figures in the calculations.

Part (b)(ii)

1. Failing to recalculate the figures that appeared in part (a), i.e. eliminate the effect of the internal transactions. Virtually every candidate failed to complete this task.
2. Failing to mention the gearing (loan) for P Limited, and then to calculate relevant, supporting figures.
3. Failing to fully explain the original cost and the written down value of non-current assets, and then to explain how this affected the ROCE.
4. Putting forward general (and weak) comments relating to revenue and cost of sales.
5. Including motivational issues that did not relate to the question.

Part (c)

1. Incorrectly describing the various methods of transfer pricing, such as dual pricing.