Examiner's report

MA1 Management Information
For CBE and Paper exams covering January to June 2014

General Comments

The examination paper consisted of 50 multiple-choice questions, each worth 2 marks.

The three questions below, covering different aspects of the syllabus, are examples of questions that candidates found difficult. This report explains, for each sample question, the basis for the correct answer and for each of the incorrect options selected by the candidates.

Sample Questions for Discussion

Example 1

Supervisors' salaries and computer services are among the costs incurred in a factory. Costs expected at a range of activity levels are:

Activity (000 units)	125	150	175	200
Costs ($000):				
Supervisors' salaries	60	66	66	72
Computer services	42	46	50	54

Which of the following classifications could describe the cost behaviour?

	Supervisors' salaries	Computer services
A	Semi-variable	Semi-variable
B	Semi-variable	Variable
C	Stepped-fixed	Semi-variable
D	Stepped-fixed	Variable

This question tested item C1a in the Study Guide regarding cost classification.

For each of the elements of cost in the question, candidates had two choices. In the case of the cost of supervisors' salaries it had to be decided whether it was a semi-variable cost or a stepped-fixed cost. Majority of the candidates correctly identified that it was a stepped-fixed cost. This was the correct classification (rather than as a semi-variable cost) because, although there were increases in cost with increased activity which is also a feature of semi-variable costs, an increase did not occur at each activity increment. The same cost was incurred at both 150,000 units and 175,000 units. This fact identified supervisors' salaries as a stepped-fixed cost (increases in cost at particular stages of activity expansion) rather than as a semi-variable cost (continuous increase in cost with activity expansion).

In the case of the cost of computer services, candidates had to decide whether it was a variable cost or a semi-variable cost. A few candidates correctly identified that it was a semi-variable cost and therefore selected the correct answer, Option C. Looking at the data for computer services, it can be identified that there is a variable element to the cost because the cost increases by $4,000 for each increase in activity of 25,000 units. This works out at a cost of $0.16 ($4,000 ÷ 25,000 units) per unit of activity. If computer services was a variable cost the total cost, for example, at activity of 125,000 units would be $20,000 (125,000 units × $0.16 per

unit). The fact that the total cost at 125,000 units is $42,000 indicates that there is also a $22,000 ($42,000 - $20,000) fixed element to the cost and thus the cost is semi-variable not variable. This was missed by many candidates.

Example 2

The following transactions relate to Material MM3 for a period:

Day	Transaction	Quantity (kgs)	Price ($ per kg)
1	Balance	276	6.20
5	Issue	181	
8	Purchase	630	5.80
15	Issue	215	

What is the value of the issues for the period (to the nearest $) using the periodic weighted average pricing method?

A	$2,297
B	$2,380
C	$2,376
D	$2,345

This question tested item D1d in the Study Guide regarding the different methods used to price materials issued from inventory.

Confusion as to what a periodic weighted average means was clearly demonstrated by the candidate responses, with only a few selecting the correct answer, Option D. The periodic weighted average method of materials pricing calculates a single issue price for each material each accounting period by combining the opening balance of the material and all receipts during the period. Each price is weighted according to the quantity at that price. In this case the calculation is [(276kg × $6.2/kg) + (630kg × $5.8/kg)] ÷ (276 + 630 kg) = $5.922 per kg. The value of the total issues for the period is $2,345 [(181 + 215 kg) × $5.922/kg].

Many candidates used the wrong basis for calculating the average price (Options B and C). Option B used the issue value that would result from calculating and using the cumulative weighted average, rather than the periodic weighted average, pricing method. The cumulative weighted average method requires the calculation of a revised weighted average price after each purchase rather than a single weighted average price each period. Applying the cumulative method to the data in this question, the price of $6.20 per kg would have been applied to the issue on Day 5 and then a new weighted average price would be calculated after the purchase on Day 8 (combining the remainder of the opening inventory and the new purchase) and applied to the issue on Day 15. Option C was based, incorrectly, on a simple average, rather than a weighted average, of the prices per kg i.e. [($6.2 + $5.8) ÷ 2] × (181 + 215 kg) = £2,376.

A minority of candidates selected Option A which was simply based on using the latest price, $5.80 per kg, for all of the issues during the period.

Example 3

Company Z uses a marginal costing system as the basis for its profit statements for management. 4,660 units of the Company's single product were sold in Period 6 for a total revenue of $88,540. Production in the period was 4,730 units.

Unit costs of the product are:

	$ per unit	$ per unit
Direct costs	*6.20*	
Variable production overhead	*0.90*	
Fixed production overhead	*4.60*	*11.70*
Variable non-production overhead	*1.40*	
Fixed non-production overhead	*2.90*	*4.30*
Total costs		*16.00*

What is the total contribution in Period 6?

A $48,335
B $55,454
C $34,018
D $48,930

This question tested item C1d in the Study Guide regarding profit statements in absorption and marginal costing.

Candidate answers to this question were fairly evenly spread across the four options demonstrating widespread, but varied, misunderstanding of what contribution is and how it is calculated in a marginal costing system.

The correct answer is Option D. Candidates need to recognise that contribution is the difference between sales revenue and the total of all of the variable costs, whether incurred in production or not. In a marginal costing system the total contribution reported for a period will be the total sales revenue less the total variable costs of the products sold. If more or less product is produced than sold then this is adjusted in the inventory valuation which will be at the variable production cost per unit. In this question the total contribution for the period is $48,930 {$88,540 – [4,660 units × ($6.2 + $0.9 + $1.4)/unit]}.

Selecting Option B is believing that contribution is calculated as sales revenue less variable production costs only, rather than all variable costs {$88,540 – [4,660 units × ($6.2 + $0.9)/unit]}. Candidates who selected Option A, believed that the contribution for a period is the total sales revenue less the variable costs per unit multiplied by the production units {$88,540 – [4,730 units × ($6.2 + $0.9 + $1.4)/unit]}, rather than the sales units, for a period. Selecting Option C means candidates believed that contribution is calculated as sales revenue less the production cost of sales {$88,540 – [4,660 units × ($6.2 + $0.9 + $4.6)/unit]}. This is the gross profit not the contribution.

Summary

The illustrations of questions and examination performance covered in this report indicate widespread problems that are encountered by candidates in both the computer-based and the paper-based examinations for this

subject. They should serve as pointers, both for students and for tutors, as to aspects of the syllabus that are widely misunderstood and to which particular attention should be paid.