Examiner's report

MA2 Managing Costs & Finances
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 candidates.

Sample Questions for Discussion

Example 1

A company's single product requires 1.6 litres of material M in each finished unit. 10% of material is lost in processing. Sales in Period 2 are expected to be 5,700 units and product inventory is planned to be reduced by 200 units over the period.

What is the expected usage of material M in Period 2?

A *9,778 litres*
B *10,489 litres*
C *10,133 litres*
D *9,680 litres*

This question tested item B1e in the Study Guide regarding material input requirements where wastage occurs.

Because of the 10% wastage, the amount of materials required to be input to achieve 1.6 litres of output is 1.6 ÷0.9 = 1.7 recurring. This required input amount is then multiplied by the number of units to be produced in the period. This is the expected sales of the product less the planned reduction in finished goods inventory. Thus the correct answer is [(5,700 – 200 units) × 1.7 recurring per unit] = 9,778 litres (Option A).
The most popular answer, selected by majority of the candidates, was Option D. Candidates selecting this option made the mistake of thinking that the materials input per unit that was required to allow for the 10% wastage was 1.6 × 1.1 = 1.76 litres. This in fact represents only a 9.09% wastage allowance {[(1.76 – 1.6) ÷ 1.76] × 100} thus understating the materials required for production. The incorrect usage per unit of output was then multiplied by the correct production units.

For Option C, the answer was based on the correct allowance for wastage but the materials input required was then multiplied by the sales units given in the question, instead of the production units which needed to be calculated. It is the production units that determine material usage requirements.

A minority of candidates selected Option B which was also based on the correct allowance for wastage. Here, the candidates made an attempt to calculate the production units but incorrectly added, rather than deducted, the 200 units inventory change when adjusting the sales units.

Example 2

What will result in over-absorption of fixed production overhead using an absorption rate based on direct labour hours?

A *Actual expenditure below budget and actual direct labour hours above budget*
B *Actual expenditure above budget and actual direct labour hours below budget*
C *Absorption based on actual expenditure and actual direct labour hours both of which are above budget*
D *Absorption based on actual expenditure and actual direct labour hours both of which are below budget*

This question tested item C1h in the Study Guide regarding the absorption of production overhead costs and the analysis and interpretation of over/under absorption.

Candidate answers to this question were fairly evenly spread across the four options. This demonstrates a widespread, but varied, misunderstanding of the overhead absorption process.

The key to understanding the process that results in over-absorption or under-absorption of overhead is recognising that production overheads are absorbed using a rate established in advance of an accounting period based on expectations both of activity and expenditure. Inevitably activity and/or overhead expenditure differ(s) from expectation and it is this that causes over-absorption or under-absorption of the overhead.

The over-absorption or the under-absorption is calculated as the difference between the actual overhead incurred (not the expected amount to be incurred), which is charged to the production overhead account, and the amount of overhead absorbed which is transferred out of the overhead account. The amount absorbed is calculated by multiplying the actual activity (not the expected activity) by the predetermined production overhead absorption rate. If the actual overhead expenditure exceeds the overhead absorbed then the overhead is under-absorbed and the balancing amount is debited against profit. If the overhead absorbed exceeds the actual expenditure then the overhead is under-absorbed and the balancing amount is credited to profit.

Only a minority of candidates selected the correct answer, Option A. Both expenditure below budget and activity (direct labour hours in this question) above budget will result in over-absorption. Option B was the reverse of Option A thus causing under-absorption.

Options C and D were both incorrect because absorption based on actual expenditure will exactly absorb the amount spent regardless of whether actual activity is above or below budget. The absorption rate is not predetermined but instead is established after the event and therefore calculated to fully absorb the overhead incurred based on the actual activity. More than half of the candidates selected Option C or Option D indicating that there was a widespread and fundamental misunderstanding of overhead absorption.

Example 3

The direct costs of job J76 comprise the following:

	$
Direct labour (45 hours)	*520*
Direct material M1 (72 kg)	*430*
Direct material M2 (25 litres)	*120*

Production overheads are absorbed at a rate of $8.60 per direct labour hour. Non-production overheads are absorbed at 10% of sales revenue. Selling prices are determined so as to achieve a net profit margin of 12% of sales revenue.

What is the selling price of job J76 (to the nearest $)?

A *$1,868*
B *$1,778*
C *$1,821*
D *$1,813*

This question tested item C3d in the Study Guide regarding the application of cost plus pricing in job costing. The question essentially tested candidates' understanding of mark-ups and margins.

Option A is the correct answer.. The production costs of the job are $1,457 (direct costs $1,070 + production overheads 45 direct labour hours × $8.60 per hour). An amount equivalent to 22% of sales revenue (10% + 12%) is required on top of the production costs to cover the fixed non-production overheads and provide the required net profit. This means that the production costs are 78% (100% - 22%) of the selling price of the job. The selling price is, therefore, $1,457 ÷ 0.78 = $1,868.

A larger proportion of candidates, incorrectly selected Option B. This answer of $1,778 adds 22% to the total production costs with the effect that the percentage of sales is only 18% [(22 ÷ 122) × 100], not 22%, thus understating the required selling price of the job. Adding 22% is assuming that this is the required mark-up % not the required margin % of sales.

The remaining options, C and D, also make incorrect uplifts to the production costs of the job to determine the selling price which in each case understates the required amount. Option C, incorrectly adds 10% to the production costs to understate the total costs but then correctly divides the resulting figure by 0.88 to provide the profit. Option D correctly divides the total production costs by 0.9 for the non-production costs but then incorrectly adds 12% to the correct total costs to understate the required profit.

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 tutors, as to aspects of the syllabus that are widely misunderstood and to which particular attention should be paid.