

Examiner's report

MA2 Managing Costs & Finance

For CBE and Paper exams covering July to December 2015

General Comments

The examination consists of 50 objective test questions, each worth 2 marks. The purpose of this report is to provide illustrations of questions which have especially posed problems for candidates.

The three sample multiple-choice questions below cover different aspects of the syllabus. The approach to correctly answering each question is explained and the common incorrect approaches, along with the misunderstandings which they indicate, are highlighted. Answering objective test questions requires candidates to have both a clear understanding of the subject matter being examined and a logical approach.

Sample Questions for Discussion

Example 1

An investment project has a positive net present value of \$33,274 when discounted at the cost of capital of 10% per annum. The estimated net cash inflows at the end of each year of the project's five-year life are \$64,000. The annuity factor at 10% per annum for five years is 3.791.

What is the investment amount in Year 0?

- A \$275,898
- B \$286,726
- C \$273,350
- D \$209,350

This question tested candidates' understanding of capital investment appraisal using discounted cash flow (DCF) analysis. The question required candidates to work backwards from the results of a DCF appraisal in order to determine the investment amount. All four options were popular with candidates.

The correct answer is Option D. The annuity factor at 10% per annum over a period of five years (3.791) is based on the same net cash flow arising at the end of each of the five years. It is multiplied by the figure of \$64,000 to determine the present value (PV) of the net cash inflows. The resulting figure is \$242,624. Because the net present value (NPV) of the investment project (i.e. PV of the net cash flows compared with the investment amount) is a positive \$33,274 then the investment amount will be less than the PV of the net cash inflows by that amount. Thus the investment amount is \$209,350 (\$242,624 - \$33,274).

Option A is incorrect because the positive NPV of \$33,274 has been added to (rather than deducted from) the PV of the net cash inflows (\$242,624 + \$33,274 = \$275,898). This assumes that the NPV is negative (i.e. that the investment amount is greater than the PV of the net cash inflows).

Option B is incorrect because a factor of 5 (for the five years) has been applied to the annual net cash inflows $[(\$64,000 \times 5) - £33,274 = \$286,726]$. This assumes no discounting.

Option C is incorrect because a factor of 4.791 (rather than 3.791) has been applied to the annual net cash inflows $[(\$64,000 \times 4.791) - \$33,274 = \$273,350]$. This incorrectly assumes that a further \$64,000 is received as soon as the investment is made.

Example 2

Two products (X and Y) are produced jointly in a manufacturing process. Common process costs are apportioned on the basis of sales value. The following data relate to a period in which the common costs were \$38,600:

	Product X	Product Y
Selling price at split-off point	\$8.00 per unit	\$15.00 per unit
Selling price after further processing	\$10.00 per unit	\$18.00 per unit
Output	2,500 units	2,300 units

What amount of the common process costs in the period will be apportioned to Product X?

- A \$14,165
- B \$14,533
- C \$20,104
- D \$13,426

This question tested candidates' ability to apportion joint process costs on the basis of sales value. All four options were selected by a significant proportion of candidates. Options B and C were equally popular, with Option A (the correct answer) and Option D slightly less so.

In this question, further processing occurs after the split-off point in the joint process. Where the common process costs (i.e. those incurred before the split-off point) are to be apportioned on the basis of sales value then it is the relative sales values of the joint products at the split-off point, rather than the final sales values after further processing, that are relevant. Also, sales value means the total sales values of the output of the products (X \$20,000: Y \$34,500) not just the selling prices (X \$8.00: Y \$15.00) in order to determine the appropriate weighting between the products.

Option A is the correct answer. The apportionment of common process costs to Product X is \$14,165 $[\$38,600 \times (\$20,000 \div \$54,500)]$.

Option B (\$14,533) is incorrect because it uses final sales values, i.e. after further processing $[\$38,600 \times (\$25,000 \div \$66,400)]$. Option D (\$13,426) is incorrect because the apportionment is based on the relative selling prices at the split-off point $[\$38,600 \times (\$8.00 \div \$23.00)]$. Option C (\$20,104) is incorrect because it ignores sales prices/values entirely and instead bases the common cost apportionment on output quantities $[\$38,600 \times (2,500 \text{ units} \div 4,800 \text{ units})]$.

Example 3

Which of the following will affect the working capital cycle?

- (1) An increase in the credit period agreed with customers
- (2) A reduction in inventory of raw materials calculated as a percentage of the amount used in production
- (3) Delayed payment to suppliers
- (4) An increase in the finished goods turnover period

- A** 1 and 3 only
- B** 2 and 4 only
- C** 1, 2 and 3 only
- D** 1, 2, 3 and 4

This question tested candidates' understanding of the working capital cycle and how it is affected by changes in different current assets and liabilities. Options B, C and D were all selected by a similar proportion of candidates but a significantly greater proportion chose Option A which was not the correct answer.

The working capital cycle is the period of time that elapses between the point at which cash begins to be expended on the production of a product and the collection of cash from the purchaser of the product.

The correct answer is Option D because all four of the items listed in the question will affect the working capital cycle.

An increase in the credit period agreed with customers (item 1) will mean that customers would take longer to pay for their purchases thus increasing the working capital cycle of the seller.

A reduction in the inventory of raw materials (item 2) may not of itself reduce the working capital cycle if it simply results from a reduction in production activity. However, the fact that the question states that raw materials inventory is reduced as a percentage of the amount used in production means that the materials will be held in inventory for a shorter period of time than previously before they are used.

Delayed payment to suppliers (item 3) will also reduce the working capital cycle because it would mean that cash is going out of the business later than hitherto.

An increase in the finished goods turnover period (item 4) means that finished goods will be held for a longer period of time than hitherto thus increasing the working capital cycle.

The most popular option, Option A, failed to recognise that the holding of raw materials and finished goods inventories are important elements of the working capital cycle, as well as supplier/customer payments. Option B failed to recognise that supplier/customer payments are important elements of the working capital cycle, as well as raw materials and finished goods inventories. Option C excluded finished goods inventory.

Summary

The three multiple-choice questions illustrated in this report reveal a number of misunderstandings, confusion or a lack of knowledge amongst candidates regarding the particular topics being examined. In many cases this may be symptomatic of a more widespread problem which can only be overcome by a rigorous study program and by practicing objective test questions. Candidates preparing for future examinations should try to ensure that they develop a clear understanding of the different areas of the syllabus, read questions carefully and think logically when answering them.