

Examiner's report

MA2 Managing Costs & Finance

December 2012



General Comments

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

The four 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 some candidates.

SAMPLE QUESTIONS FOR DISCUSSION

Example 1

The fixed production overhead absorption rate for Product X is \$16.00 per machine hour. Each unit of the product requires 1.2 machine hours. Inventory of Product X was 800 units at the beginning of a period and 850 units at the end.

What is the difference in profit in the period if marginal costing is used instead of absorption costing?

- A \$800 higher*
- B \$960 higher*
- C \$800 lower*
- D \$960 lower*

This question tested item C2e in the Study Guide.

The difference between absorption and marginal costing is that product costs include fixed production overheads using absorption costing whereas they are treated as period costs using marginal costing. Thus, if inventory increases in a period the fixed production overheads included in inventory will increase using absorption costing. The resulting profit for the period will be correspondingly higher compared with using marginal costing i.e. the marginal costing profit will be lower.

During the period in this question the units of product in inventory increased by 50 units (850 units in closing inventory – 800 units in opening inventory) and so the marginal costing profit will be lower (Options C and D).

The fixed production overhead absorption rate is \$16 per machine hour and each unit requires 1.2 machine hours. The fixed production overheads per unit of product are, therefore, \$19.20 (\$16/machine hour × 1.2 machine hours/unit).

Option D is the correct answer. This is calculated as 50 units × \$19.20/unit = \$960.

Option C incorrectly assumed that the fixed production overheads per unit of product are \$16 (50 units × \$16/unit = \$800).

Option B included the correct unit cost but incorrectly stated the marginal costing profit to be higher.

Option A included both an incorrect unit cost and wrongly stated that the profit would be higher.

Example 2

Which of the following performance measures are relevant for both profit centres and investment centres?

- 1 *Return on capital employed*
- 2 *Residual income*
- 3 *Net profit margin*
- 4 *Labour efficiency*

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

This question tested item A1d in the Study Guide.

Managers of cost centres are responsible for costs only. Performance measurement in cost centres will, therefore, be related to cost management only. Managers of profit centres are responsible for revenues as well as costs. Performance measures in profit centres will, therefore include measures related to revenue and profit performance as well as costs.

Measures used to assess performance in investment centres will be the same as those used in profit centres with; in addition, measures of the success of capital investment decisions for which investment centre managers are responsible.

Such measures, especially return on capital employed, residual income (which is profit less an interest charge on capital employed) and asset turnover are thus unique to investment centres. They cannot be used in cost centres or profit centres because the managers of those centres do not have responsibility for investment performance.

It follows from the above that Options A, B or C cannot be a correct answer to the question because they include performance measures unique to investment centres. However, these three options were selected by majority of candidates. Option D was the correct answer because net profit margin and labour efficiency are measures that can be used both in profit centres and in investment centres.

Example 3

Production overheads are absorbed using a predetermined rate per machine hour. The actual machine hours in a period were less than budget whilst overhead expenditure was above budget.

How will the over/under absorption of production overheads in the period be accounted for?

- A** *The over absorption will be debited to the income statement*
- B** *The over absorption will be credited to the income statement*
- C** *The under absorption will be debited to the income statement*
- D** *The under absorption will be credited to the income statement*

This question tested item C1h in the Study Guide.

The predetermined overhead absorption rate in this question is calculated by dividing the total budgeted overhead costs by the total budgeted machine hours. This rate is then used to absorb overheads during a period according to the actual number of machine hours worked.

Over/under absorption is the difference between the actual overhead expenditure incurred during the period and the amount of overhead absorbed. It follows that if actual overhead expenditure is above budget and the machine hours worked are below budget (the scenario in this question) then the overhead will be under absorbed, i.e. more spent than absorbed will leave an amount of overhead to be charged (debited) against profit in the income statement.

Option C is, therefore, the correct answer.

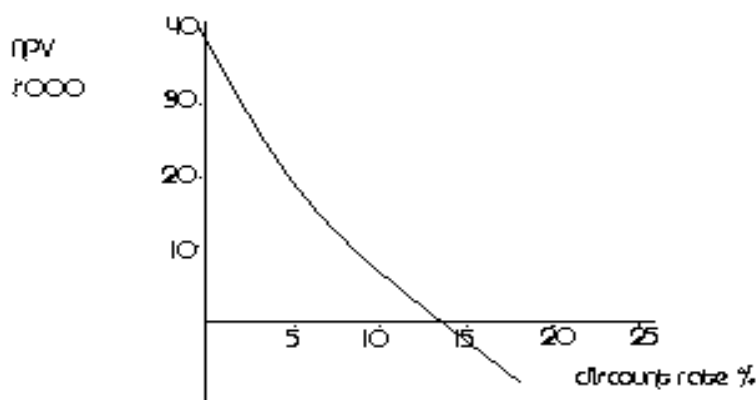
More candidates selected Option B thinking, incorrectly, that it was an over absorption that would then have led to a credit to the income statement.

Some candidates selected Option D thinking, incorrectly, that the under absorption would be credited to the income statement.

Some candidates selected Option A thinking, incorrectly, both that it was an over absorption and that it would lead to a debit to the income statement.

Example 4

A capital investment project has the following NPV profile over a range of discount rates. The cost of capital is 11%.



Which statement(s) is/are true in relation to the above diagram?

- 1 The IRR is greater than 15%
- 2 Based on DCF analysis, the project is worthwhile
- 3 The NPV is positive when discounted at 16%

4 *The investment amount is \$40,000*

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

This question tested item D3g in the Study Guide.

Taking each of the statements in the question in turn:

Statement 1:

When the NPV of a capital investment project is plotted against a range of discount rates on a chart the IRR of the project is the point where the NPV curve cuts the horizontal (x) axis, i.e. it is the point at which the NPV is zero.

Reading from the chart, the IRR is approximately 14% and, therefore, the statement that the IRR is greater than 15% is not true.

Statement 2:

Based on DCF analysis, any project that has a positive NPV when discounted at the cost of capital is worthwhile. The project in question can be seen to have a positive NPV at 11% (the cost of capital) as the point on the NPV curve, in line with 11%, lies above, rather than below, the horizontal axis of the chart. The statement that the project is worthwhile is, therefore, true.

Statement 3:

The NPV of the project is in fact negative, not positive, when discounted at 16% as the NPV curve at that point is below, rather than above, the horizontal axis. The statement is, therefore, not true.

Statement 4:

The NPV curve cuts the vertical (y) axis at a value of \$40,000. This is in fact the undiscounted (i.e. 0% discount rate) net cash flow of the investment project (investment amount less total net cash inflows). It is a positive value indicating net cash flows greater than the investment amount. It cannot represent the investment amount and whether or not the investment amount is \$40,000 cannot be established from the diagram. The statement is not true.

It follows from the above that Option B (statement 2 only) is the correct answer. Option A was chosen incorrectly believing that statement 1 was also true. This indicated a lack of understanding about the IRR.

Option D was incorrectly chosen believing that statements 3 and 4 were true as well as statement 2. This indicates a more widespread misunderstanding of the diagram.

Finally, some candidates selected Option C, incorrectly believing that statements 3 and 4 only were true. Both statements are in fact not true. These candidates also failed to recognise that statement 2 is true, i.e. the project is worthwhile using DCF.