Accounting Technicians Ireland

# Management Accounting

2nd Year Examination

**August 2012**

**Exam Paper, Solutions & Examiner's Report**

Professional. Practical. Proven.

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# Accounting Technicians Ireland

## 2nd Year Examination: August 2012

## Paper : MANAGEMENT ACCOUNTING

24th August 2012 - 2.30 p.m. to 5.30 p.m.

**INSTRUCTIONS TO CANDIDATES**

**In this examination paper the €/£ symbol may be understood and used by candidates in Northern Ireland to indicate the UK pound sterling and the €/£ symbol may be understood by candidates in the Republic of Ireland to indicate the Euro.**

**Answer FIVE questions.**
**Answer all three questions in Section A. Answer any two of the three questions in Section B.**

**If more than the required number of questions is answered, then only the requisite number, in the order filed, will be corrected.**

**Candidates should allocate their time carefully.**

**All figures should be labelled, as appropriate, e.g. €/£'s, units etc.**

**Answers should be illustrated with examples, where appropriate.**

**Question 1 begins on Page 2 overleaf.**

**SECTION A**
**ANSWER ALL THREE QUESTIONS**

**QUESTION 1** *(Compulsory)*

The owner of Office Furniture Limited instructs you to prepare a monthly cash budget for the next three months. You are presented with the following budget information for September, October and November 2012:

| | September | October | November |
|---|---|---|---|
| | €/£ | €/£ | €/£ |
| Sales | 590,000 | 650,000 | 750,000 |
| Production costs | 300,000 | 350,000 | 420,000 |
| Sales & Administration expenses | 150,000 | 170,000 | 200,000 |
| Capital expenditure | 0 | 0 | 120,000 |

- The company expects 10% of sales revenue to be cash sales and in the current climate that a 5% allowance for receivables will be required.
- 60% of sales revenue is expected to be collected in full the month following the sale and the remainder the following month.
- Depreciation and insurance costs combined represent €/£60,000 of the estimated monthly production costs per month.
- The annual insurance premium of €/£384,000 is paid in September.
- 80% of the remainder of production costs are expected to be paid in the month in which they are incurred and the balance in the following month.
- Current assets at the 1st September include a bank balance of €/£55,000 and accounts receivable (net of provisions) of €/£611,135 (€/£459,135 from August sales and €/£152,000 from July sales).
- Current liabilities at the 1st September include a short term loan of €/£100,000, which is repayable together with a premium of 2% in October, and €/£60,000 of accounts payable incurred in August for production costs.
- All selling and administrative expenses are paid in cash in the period they are incurred.
- It is expected that €/£35,000 of dividends will be paid to Shareholders in September. Dividends of €/£8,000 on investments held will be received in October.

**Requirement:**

(a) Prepare a monthly cash budget and supporting schedules for September, October and November 2012.

**14 Marks**

(b) Calculate the Receivables and Payables figure to be included in the projected Statement of Financial Position at 30 November 2012.

**2 Marks**

(c) On the basis of the cash budget prepared, what recommendations should be made to the company?

**4 Marks**
**Total 20 Marks**

**QUESTION 2** *(Compulsory)*

Davisfield Ltd. produces agricultural machinery parts and has classified the production process into two sections - Assembly and Finishing, which are supported by the Service Departments - Administration, Stores and Quality Control.

| | Allocated overhead costs €/£ | No. of Employees |
|---|---|---|
| Production Departments | | |
| Assembly | 35,000 | 20 |
| Finishing | 44,000 | 15 |
| Service Departments | | |
| Administration | 70,000 | 10 |
| Stores | 8,000 | 2 |
| Quality Control | 8,000 | 3 |

- During the year, 50,000 machine hours were worked in the Assembly Dept. and 20,000 direct labour hours (at a cost of €/£12 per hour) were worked in the Finishing Dept.
- Stores received 1,500 requisitions from Assembly and 1,000 from Finishing.
- Quality Control carried out 2,000 chargeable hours for Assembly and 1,000 for Finishing.
- One special piece of equipment, FARM100, was produced during the year. It took 100 machine hours of Assembly time and 55 direct labour hours in the finishing dept. Direct costs were €/£650.

**Requirement:**

(a) Calculate an appropriate absorption rate for:
(i) Assembly Dept.
(ii) Finishing Dept.

**10 Marks**

(b) Calculate:
(i) The total factory cost of the special equipment, FARM100.
(ii) A sales price for FARM100 based on a 20% margin.

**6 Marks**

(c) Discuss the relevance of absorption costing where there are a high level of service costs.

**4 Marks**
**Total 20 Marks**

**QUESTION 3** *(Compulsory)*

VB Ltd. manufactures and sells a single item of farm machinery, which is distributed through ... network, at a sales price of €/£1,250 per item. The budgeted sales for the 2012 year are 36,000 units, which represents 60% of the firm's capacity. The following production information has been provided:

| | | €/£ |
|---|---|---|
| Direct Materials | | 17,820,000 |
| Direct Labour | | 1,980,000 |
| Production Overhead | - Fixed | 12,740,000 |
| | - Variable | 1,226,000 |
| Sales/Distribution Overhead | - Fixed | 2,110,000 |
| | - Variable | 214,000 |

**Requirement:**

(a) Calculate the breakeven cost in units and sales revenue .

**4 Marks**

(b) Define and calculate the margin of safety, expressed in % terms.

**4 Marks**

(c) The Sales Director proposes to expand to 80% capacity by reducing the sales price by 10% and spending an additional €/£3,000,000 on advertising. Calculate the impact of this proposal on breakeven, margin of safety and profitability and advise management whether this proposal should be adopted.

**8 Marks**

(d) Outline the limitations of using the analysis outlined in part (c) above in a decision making context.

**4 Marks**
**Total 20 Marks**

## SECTION B
## ANSWER TWO OUT OF THE FOLLOWING THREE QUESTIONS

### QUESTION 4

Pres Ltd has provided the following standard costing information for the month of April 2012:

| | *Budget/Standard* | *Actual* |
|---|---|---|
| Sales | 2,500 x €/£100 | 2,600 X €/£108 |
| Materials | 5kg per unit | 14,000kg |
| Materials price | €/£9 per kg | €/£128,800 |
| Labour hours | 2 hours per unit | 5200 hours |
| Labour rate | €/£12/ hour | €/£11.75/hour |

**Requirement**

(a) Prepare a statement of budget, actual and flexed gross profit for the month of April 2012.

**5 Marks**

(b) Prepare a statement identifying all relevant variances required to reconcile actual with budgeted profit.

**12 Marks**

(c) Discuss possible reasons for material variances reported in April 2012 for Pres Ltd.

**3 Marks**
**Total 20 Marks**

### QUESTION 5

The Sales Director has recently attended a course entitled *'Finance for Non-Accounting Managers'*. He wants to understand more about a number of management accounting terms that he feels may be relevant to him. He asks you to prepare a memorandum explaining and providing examples of the following:

- Attainable Standard;
- Zero Based Budgeting;
- Opportunity Costs;
- Batch Costing ;
- Equivalent Units.

**Total 20 Marks**

**QUESTION 6**

Dunning Limited has recently introduced at Activity Based Costing System and has provided the following details for the month of January:-

| **Cost Pool** | ***Overhead Cost €/£*** |
|---|---|
| Parts | 10,000 |
| Maintenance | 18,000 |
| Stores | 10,000 |
| Administration | 2,000 |

You have ascertained the following activity information:-

| | |
|---|---|
| *Number of employees* | *40* |
| *Total number of parts* | *500* |
| *Number of materials requisitions* | *20* |
| *Maintenance hours* | *600* |

During the month, 500 units of Product Y were produced. This production run required 100 parts and 150 maintenance hours; 5 material requisitions were made and 10 employees worked on the units.

**Requirement**

(a) Using Activity Based Costing, calculate the total amount of overhead absorbed by each unit of Product Y.

**10 Marks**

(b) Discuss *THREE* different types of controls and explain how activity based costing assists in the control of costs?

**10 Marks**
**Total 20 Marks**

# 2nd Year Examination: August 2012

# Management Accounting

# Suggested Solutions

**Students please note:** These are suggested solutions only; alternative answers may also be deemed to be correct and will be marked on their own merits.

## Solution 1-Office Furniture Limited

**(a) - Cash Budget**

| | September €/£ | October €/£ | November €/£ | Marks Allocated |
|---|---|---|---|---|
| | | | | **1 mark** |
| **INFLOWS** | | | | |
| Receivables | 517,090 | 554,345 | 613,650 | ***See below*** |
| Dividend | | 8,000 | | **1 mark** |
| Total Inflows | 517,090 | 562,345 | 613,650 | **1 mark** |
| **OUTFLOWS** | | | | |
| Payables | 252,000 | 280,000 | 346,000 | **1 mark** |
| Insurance | 384,000 | | | **1 mark** |
| Sales & Admin | 150,000 | 170,000 | 200,000 | **1 mark** |
| Dividend | 35,000 | | | **1 mark** |
| Loan repayment | | 102,000 | | **1 mark** |
| Capital Expenditure | | | 120,000 | **1 mark** |
| Total Outflows | 821,000 | 552,000 | 666,000 | **1 mark** |
| **Net cash position** | **(303,910)** | **10,345** | **(52,350)** | |
| Opening Bank | 55,000 | (248,910) | (238,565) | **1 mark** |
| **Closing Bank** | **(248,910)** | **(238,565)** | **(290,915)** | |

Marks Allocated

***Workings***

**Receivables**

| | | August | September €/£ | October €/£ | November €/£ |
|---|---|---|---|---|---|
| Revenue | | 537,000 (1) | 590,000 | 650,000 | 750,000 |
| Cash | 10% | 53,700 | 59,000 | 65,000 | 75,000 |
| Receivables | | 483,300 | 531,000 | 585,000 | 675,000 |
| | 60% | 322,200 | 354,000 (2) | 390,000 | 450,000 |
| | 30% | 161,100 | 177,000 (3) | 195,000 | 225,000 |
| Receivables | | | 531,000 | 585,000 | 675,000 |
| Allowance | 5% | 24,165 | 26,550 | 29,250 | 33,750 |
| Opening Balance<br>revenue – July<br>- August | | | <br>152,000<br>306,090 | <br><br>153,045 | |
| September revenue | | | 59,000 | 336,300(2) | 168,150 (3) |
| October revenue | | | | 65,000 | 370,500 |
| November revenue | | | | | 75,000 |
| **Total receivables** | | | **517,090** | **554,345** | **613,650** |

**2 marks**

*(1) 459,135 = 85.5% of August Sales (-10% cash – 5% of balance (90%) = 4.5% of gross)*
*Gross Sales - €/£537,000*
*(2) 60% of revenue less 5% allowance ( x 95%) = €/£336,300*
*(3) 30% of revenue less 5% allowance ( x 95%) = €/£168150*

**Debtors Control Account** (not required by solution – for explanation purposes)

| | | | |
|---|---|---|---|
| 1/9 Opening Balance | 611,135 | Received – July a/cs | 152,000 |
| September Sales | 590,000 | Received – August a/cs | 306,090 |
| | | Cash Received | 59,000 |
| | | Allowance | 26,550 |
| | | 30/9 Closing Balance | 657,495 |
| | **1,201,135** | | **1,201,135** |
| 1/10 Opening Balance | 657,495 | Received – August a/cs | 153,045 |
| October Sales | 650,000 | Received – Sept a/cs | 336,300 |
| | | Cash Received | 65,000 |
| | | Allowance | 29,250 |
| | | 31/10 Closing Balance | 723,900 |
| | **1,307495** | | **1,307495** |
| 1/11 Opening Balance | 723,900 | Received – Sept a/cs | 168,150 |
| November Sales | 750,000 | Received – October a/cs | 370,500 |
| | | Cash Received | 75,000 |
| | | Allowance | 33,750 |
| | | 30/11 Closing Balance | 826,500 |
| | **1,473,900** | | **1,473,900** |

**Payables**

| | | September €/£ | October €/£ | November €/£ | o/s |
|---|---|---|---|---|---|
| Production Costs | | 300,000 | 350,000 | 420,000 | |
| Depreciation & Insurance | | 60,000 | 60,000 | 60,000 | |
| Insurance | | 32,000 | 32,000 | 32,000 | |
| Depreciation (non Cash) | | 28,000 | 28,000 | 28,000 | |
| Balance | | 240,000 | 290,000 | 360,000 | |
| Payable in month | 80% | 192,000 | 232,000 | 288,000 | |
| Payable – 1 month in arrears | 20% | 60,000 | 48,000 | 58,000 | 72,000 |
| Payables | | **252,000** | **280,000** | **346,000** | |

Insurance Premium – per annum €/£384,000 – per month - €/£32,000

Loan repayment
100,000 + 2% = 102,000

(b)

<u>Receivables due at 30 November</u>

| | | |
|---|---|---|
| 25.5% x 650,000 | 165,750 | |
| 85.5% x 750,000 | 641,250 | |
| | **€/£807,000** | **1 mark** |

<u>Payables due at 30 November</u>

| | | |
|---|---|---|
| (420,000-60,000) x 20% | **€/£72,000** | **1 mark** |

(c) Recommendations to the Company

Discuss projected cashflows with bank and seek temporary overdraft
Seek financing option for Insurance premium payment
Seek to extend short term loan arrangement
Negotiate additional credit with suppliers
Look at inventories and other assets to raise additional working capital
Review credit control arrangements to minimise allowance (bad debt)

**4 marks**

## Solution 2-Davisfield Ltd

**(a) Absorption Costing Statement**

| | Production | | Service | | | |
|---|---|---|---|---|---|---|
| | Assembly (€/£) | Finishing (€/£) | Administ-ration (€/£) | Stores (€/£) | Quality Control (€/£) | 1 mark |
| Allocated Overheads | 35000 | 44000 | 70000 | 8000 | 8000 | 1 mark |
| Service Apportionment | | | | | | |
| Administration | 35000 | 26250 | (70000) | 3500 | 5250 | 2 marks |
| Quality Control | 8835 | 4415 | | | (13250) | 1 mark |
| Stores | 6900 | 4600 | | (11500) | | 1 mark |
| **Total** | **85735** | **79265** | **-** | **-** | **-** | |
| | 50000 machine hours | 20000 direct labour hours | | | | 2 marks |
| **Absorption Rate** | **€/£1.71 per machine hour** | **€/£3.96 per direct labour hour** | | | | 2 marks |

*Notes:*
*Allocated overhead – per question*
*Administration apportionment based on employee numbers*
*Quality Control apportionment based on no of chargeable hours*
*Stores apportionment based on no .of requisitions*

**(b) FARM100 – Calculation of Cost**

| | €/£ | |
|---|---|---|
| Direct Costs | 650.00 | 1 mark |
| Direct Labour *55 x 12* | 660.00 | 1 mark |
| Overheads | | |
| Assembly Dept *100 x 1.71* | 171.00 | 1 mark |
| Finishing Dept *55 x 3.96* | 217.80 | 1 mark |
| **Total** | **1698.80** | 1 mark |
| Margin – 20% | 424.70 | |
| | | 1 mark |
| **Sales Price** | **2123.50** | |

(c)
Absorption costing provides more accurate product cost information by recognising that the costs of overheads constitute an input into the production process. Where the overhead relates to service costs, it is important that the total cost is considered for accounting and decision making purposes. **2 marks**
This will assist in improving decisions about resource utilisation and encourage the optimal use of services.
However, traditional absorption costing methods are usually calculated on a single volume based calculation, related to the most appropriate base (eg machine hours or direct labour hours) and this can lead to cost distortion as it can overlook the real underlying driver of cost. If there is a significant amount of overheads related to service costs, it may be more appropriate to look at activity based costing. **2 marks**

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**Solution 3-VB Ltd**

**Question 3 VB Ltd**

(a)

**Breakeven Point** = Fixed Cost/Contribution — 1

| | | | | |
|---|---|---|---|---|
| Fixed Costs | - Production Overhead | | 12,740,000 | |
| | - Sales /Distribution Overhead | | 2,110,000 | |
| | | | 14,850,000 | |

| Contribution | | | Total | *Per unit* | |
|---|---|---|---|---|---|
| | | | €/£ | *€/£* | |
| Sales | (*1250 x 36000*) | | 45,000,000 | *1250* | |
| Direct Materials | | 17,820,000 | | *495* | |
| Direct Labour | | 1,980,000 | | *55* | |
| Variable Overhead | (1,226k + 224k) | 1,440,000 | 21,240,000 | *40* | |
| **Contribution** | | | **23,760,000** | 660 | **1 mark** |

14,850,000/660 = **22,500 units** **1 mark**

Fixed Costs /CS Ratio

CS Ratio 660/1250 = 0.528

14,850,000/0.528 = **€/£28,125,000** **1 mark**

***(22,500 x 1250 = 28,125,000)***

**(b) Margin of Safety**

The margin of safety (MOS) is the difference between the level of budgeted sales and the breakeven level of sales. Hence, MOS is a measure of risk and the lower it is the higher the risk of not breaking even. It can be expressed in €/£, units or % terms **1 mark**

$$\frac{\text{Budgeted sales revenue/units – Breakeven sales revenue/units}}{\text{Budgeted sales revenue/units}} \times 100$$ **1 mark**

$$\frac{36000 - 22500}{36000} \times 100 = \mathbf{37.5\%}$$ **2 marks**

$$\frac{45{,}000{,}000 - 28{,}125{,}000}{45{,}000{,}000} \times 100 = 37.5\%$$

## (c ) Revised Scenario Calculations

Revised Sales price 1250-125 = €/£1125

| **Revised Contribution** | | Per unit €/£ | |
|---|---|---|---|
| Sales | (1125 x 36000) | 1125 | |
| Direct Materials | | 495 | |
| Direct Labour | | 55 | |
| Variable Overhead | | 40 | |
| Revised Contribution | | **535** | **1 mark** |

| Revised Fixed Costs | | | |
|---|---|---|---|
| Fixed Costs | - Production Overhead | 12,740,000 | |
| | - Sales /Distribution Overhead | 2,110,000 | |
| | - Additional Advertising | 3,000,000 | |
| | | 17,850,000 | |

**Revised BEP** 17,850,000/535 = **33,365 units** **1 mark**

Increased Sales 36000/60 x 80 = 48000

Revised Margin of Safety

$\frac{48000 - 33,365}{48000} \times 100$ **= 30.49%** **1 mark**

| **Revised Profitability** | | | €/£ | |
|---|---|---|---|---|
| Sales | (1125 x 48000) | | 54,000,000 | |
| Direct Materials | (495 x 48000 ) | 23,760,000 | | |
| Direct Labour | (55 x 48000) | 2,640,000 | | |
| Variable Overhead | (40 x 48000) | 1,920,000 | 28,320,000 | |
| Revised Contribution | | | **25,680,000** | **1 mark** |
| Original contribution | | | 23,760,000 | |
| Increase in contribution | | | **1,920,000** | **1 mark** |

**Comparison of Overall results**

| | Original Results €/£ | Revised Scenario €/£ |
|---|---|---|
| Contribution | 23,760,000 | 25,680,000 |
| Fixed Overhead<br>- Production<br>- Sales/Distribution | <br>12,740,000<br>2,110,000 | <br>12,740,000<br>5,110,000 |
| Profit | 8,910,000 | 7,830,000 |

**1 mark**

**Comment:**

The Sales Director's proposal will bring additional contribution of €/£1.92m, but as this does not exceed the incremental overhead costs of €/£3m, overall profitability is reduced. There are also some additional risks associated with the proposal as the breakeven point increases by almost 11,000 units and the margin of safety is reduced. **2 marks**

Other factors should be considered including the opportunity costs for the additional capacity, overall business objectives, market share, competitors and existing customers.

**(d)**

Cost Volume Profit (CVP) analysis assumes that various factors (eg: costs and revenues) are broadly linear throughout the entire range. This is unlikely to be the case as in reality quantity discounts and production efficiencies may be achieved. **1 mark**

Similarly, fixed costs are assumed to stay static and hence, CVP analysis is most useful for short term planning and decision making rather than long term. **1 mark**

CVP can only be applied to a single product (as in this example) or in some cases to a single static mix of a group of products. **1 mark**

Inventory holdings are not considered by CVP analysis and some aspects can be time-consuming to prepare. **1 mark**

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## Solution 4-Pres Ltd

**(a) Statement of Budgeted, Actual and Flexed Budget**

| | Budget (€/£) | Actual (€/£) | Flexed (€/£) | *Per Unit (€/£)* | |
|---|---|---|---|---|---|
| Revenue | 250,000 | 280,800 | 260,000 | *100* | **1 mark** |
| Materials | 112,500 | 128,800 | 117,000 | *45* | **1 mark** |
| Labour | 60,000 | 61,100 | 62,400 | *24* | |
| Cost of Revenue | 172,500 | 189,900 | 179,400 | *69* | **3 marks** |
| **Gross Profit** | **77,500** | **90,900** | **80,600** | *31* | |

(b) **Statement of Profit Reconciliation** **1 mark**

**Budgeted Profit** **€/£77,500**

(i) **Sales Price Variance**
*(Actual Sales Quantity x Actual Price) – (Actual Sales Quantity x Standard Price)*
(2,600 x 108.00) - (2,600 x 100.00)
280,800 - 260,000 = **£/€20,800 fav** **1 mark**

(ii) **Sales Volume Variance**
*(Actual Sales Quantity x Standard profit per unit) – (Standard Sales Quantity x Standard profit per unit)*
(2,600 x 31) - (2,500 x 31)
80,600 - 77,500 = **£/€3,100 fav** **2 marks**

(iii) **Material price variance**
*(Actual quantity of inputs x Actual price) – (Actual quantity of inputs x Standard Price)*
(14,000 x 9.20) - (14,000 x 9.00)
128,800 - 126,000 = **£/€2,800 adv** **2 marks**

(iv) **Materials usage variance**
*(Actual quantity of inputs x Standard price) – (Flexed quantity x Standard price)*
(14,000 x 9.00) - (5 x 2,600 x 9.00)
126,000 - 117,000 = **£/€9,000 adv** **2 marks**

(v) **Labour rate variance**
*(Actual Hours of input x Actual Rate) – (Actual Hours of input x Standard rate)*
(5,200 x 11.75) - (5,200 x 12.00)
61,100 - 62,400 = **£/€1,300 Fav** **2 marks**

(vi) **Labour efficiency variance**
*(Actual Hours of input x Standard rate) – (Standard hours required for actual output x Standard rate)*
(5200 x 12.00) - (2 x 2600 x 12.00)
62,400 - 62,400 = **£/€ -** **1 mark**

**Total Favourable Variances** **£/€25,200** **1 mark**

**Total Adverse Variances** **(£/€11,800)**

**Actual Reported Profit** **€/£90,900**

(c)
Both material variances are adverse, impacting negatively on overall performance. **1 mark**
The adverse materials price variance of €/£2,800 may be attributable to changes in market conditions, purchase of higher quality goods, loss of discount or change of supplier. **1 mark**
The adverse materials usage variance of €/£9,000 could be as a result of poor materials handling, or poor stock control; lower skilled workers or production issues resulting in more wastage. **1 mark**
In both instances, an incorrect standard for price or quantity could also result in adverse variances.

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## Solution 5
**MEMORANDUM**

**To:** **Sales Director** 1…
**From:** **Technician Student**
**Re:** **Accounting Terminology**
**Date:** **X/X/XX**

Management accounting can provide information for managers to support decision making, planning and control within an organisation. You have been introduced to a number of management accounting theories and related terminology. This paper aims to provide further information and explanation of a number of key terms: **1 mark**

Attainable Standard
An attainable standard is a term used in standard costing which is based on the theory that the standard amount of work will be carried out efficiently under normal operating conditions. Some allowance is made for delay and inefficiency. If appropriately set, the attainable standard can provide a realistic but challenging target, which can act as a motivational tool for employees. **2 marks**

An example of an attainable standard*:*
*Due to normal losses and expected downtime, the attainable standard cost of a widget is*

| | | | |
|---|---|---|---|
| | | *€/£* | |
| *Direct Materials* | *2.5 kg @ €/£5* | *12.50* | **2 marks** |
| *Direct Labour* | *5 hours @ €/£10* | *50.00* | |
| *Production overhead* | *5 hours @ €/£4* | *20.00* | |
| | | ***82.50*** | |

*A widget, produced in perfect working conditions has the following costs (ideal standard)*

| | | |
|---|---|---|
| | | *€/£* |
| *Direct Materials* | *2 kg @ €/£5* | *10.00* |
| *Direct Labour* | *4 hours @ €/£10* | *40.00* |
| *Production overhead* | *4 hours @ €/£4* | *16.00* |
| | | ***66.00*** |

Zero based budgeting
Traditional budgeting approaches are not always clearly linked to strategy and are focused on financial aspects only. In this scenario, the annual budget uses an incremental approach whereby increases and decreases are applied to previous out-turn positions. In contrast, Zero based budgeting supports a more innovative approach, requiring managers to justify all costs as if the proposals were being considered for the first time. This approach is focused on opportunity costing and can eliminate efficiencies, however it can be quite complex and time-consuming to administer. **2 marks**

A definition of zero based budgeting provided by CIMA is *'a method of budgeting whereby all activities are re-evaluated each time a budget is formulated. Each functional budget starts with the assumption that the function does not exist and is at zero cost. Increments of cost are compared with increments of benefit, culminating in the planning of maximum benefit for a given budget cost'.*

An example of zero based budgeting:
*It is proposed to increase the maintenance budget by 20% to take account of the age of some equipment and other inflationary factors. Due to zero based budgeting analysis, it is identified that a particular machine, which costs €/£8000 to maintain is only used once per quarter. An alternative outsourcing option has been identified and the budget adjusted accordingly.* **2 marks**

Opportunity Costs
Opportunity costs are a key factor in decision-making. They can be defined as the value of the next best alternatives, or the cost of the alternatives foregone. Opportunity costing focuses on the alternatives and presents a different perspective on the economically relevant cost or avoidable costs. **2 marks**

## **Solution 5** *(Cont'd)*

An example of opportunity cost:
*A firm rents a unit at a cost of €/£ 500 per week. They are considering using this space for a new project or subletting it for €/£600 per week..*
*The opportunity cost in this scenario is the €/£600/week rather than the actual cost incurred.* **2 m...**

<u>Batch Costing</u>
A batch is a similar group of articles manufactured together and batch costing is a method similar to job costing is normally used for costing purposes. Essentially, each batch is treated as a 'job' and is treated as the cost object in the exercise. Accordingly, costs are collected for each batch and divided by the number of items in the batch to give a unit cost **2 marks**

An example of batch costing:
*A bakery produces a batch of 500 specialist bread and collates cost as follows:* **2 marks**

| | | |
|---|---|---|
| | | *€/£* |
| *Materials:* | | *60.00* |
| *Labour* | | *25.00* |
| *Variable costs* | | *20.00* |
| *Production overheads* | | *45.00* |
| *Total batch cost* | *150.00* | |
| *Batch no.* | | *500* |
| *Cost per item* | | *0.30* |

<u>Equivalent units</u>
At the end of any given period of accounting, there are likely to be partly completed units in a manufacturing process. Clearly, some costs incurred during the period are attributable to these units, as well as those which are fully complete. In order to spread cost equitably - the number of equivalent units is calculated. This is the equivalent number of fully complete units which the partly complete units represent. **2 marks**

An example of equivalent units:

| | |
|---|---|
| *Production of fully complete units during period* | *1000 units* |
| *Work in progress* | *200 units – 50% complete* |
| *Total equivalent production units* | *1000 + (200*50%)=1100 units* |

*Cost would be spread over the total equivalent production of 1100 units* **2 marks**

***Maximum 20 marks***

arks
cated

## Solution 6 - Dunning Ltd

(a) Product Y – Overhead Absorption

| Cost Pool | *Workings* | €/£ | |
|---|---|---|---|
| Parts | *100 x 20* | 2,000 | 1 mark |
| Maintenance | *150 hours x 30* | 4,500 | 1 mark |
| Stores | *5 x 500* | 2,500 | 1 mark |
| Administration | *10 x 50* | 500 | 1 mark |
| **Total Overhead Absorbed** | | **9,500** | 1 mark |
| Per unit | | 19 | |

*Workings:*
**Schedule of Activity Based Overhead Absorption** 1 mark

| | Parts | Maintenance | Stores | Administration | |
|---|---|---|---|---|---|
| Overhead Cost | 10,000 | 18,000 | 10,000 | 2,000 | |
| Cost driver | Total no.of parts | Maintenance hours | No. of requisitions | No.of employees | |
| Activity level | 500 | 600 | 20 | 40 | |
| ABC overhead recovery rate | €/£20 per part | €/£30 per Maintenance hour | €/£500 per requisition | €/£50 per employee | 4 marks |

(b)
Control is one of the key features of management accounting and follows on from planning. Control can be exercised at an strategic and an operational level.
Strategically, the business plan of an organisation will be reviewed in light of developments to assess if objectives of the plan can be achieved. Operationally, the performance of the organisation is reviewed in the context of detailed plans(including budgets) so that corrective action can be taken if necessary. Effective controls is not practical without initial planning and planning without control is somewhat pointless. **1 mark**

Three different types of control include:
**Action or behavioural controls** – these involve observing the actions of individuals (eg: work studies: quality and quantity controls) to inform corrective action **2 marks**

**Personnel and cultural controls** – support employees to be effective by establishing values, social norms and beliefs that can influence performance **2 marks**

**Results and output controls** – involve the collection, analysis and reporting of information about the outcomes of work effort. An organisation should have a system of management reporting that produces control information in a specified format at regular intervals. **2 marks**

Activity Based Costing involves charging of overhead and service costs to cost pools and identifying the main factor which drives costs in the respective pools and then calculating a cost driver rate to charge units with their share of pool costs. **1 mark**

| | |
|---|---|
| | **[...]arks [...]cated** |
| Activity Based Costing improves the **accuracy** of costs, specifically overhead costs. By having accurate classification of costs and analysis of cost behaviour, managers can monitor performance more effectively and take remedial action if required. Activity Based Costing therefore contributes significantly to results and output controls, discussed above. | **1[...]** |
| Activity Based Costing can provide a better understanding of overheads and **supports performance management activities**, which can motivate individuals or teams and therefore can influence personnel and cultural controls | **1 mark** |
| Activity based costing has a **focus on activities** which drive costs and this in turn may assist managers in identifying activities which do not add value or processes which could be re-engineered to produce more effective results. Hence activity based costing can have behavioural implications resulting in action or behavioural controls. | **1 mark** |
| | ***Maximum 20 marks*** |

# 2nd Year Examination: August 2012

# Management Accounting

# Examiner's Report

| Statistical Analysis – By Question | | | | | | |
|---|---|---|---|---|---|---|
| **Question No.** | 1 | 2 | 3 | 4 | 5 | 6 |
| **Average Mark (%)** | 54% | 43% | 31% | 66% | 48% | 47% |
| **Nos. Attempting** | 196 | 188 | 189 | 180 | 65 | 146 |

| Statistical Analysis - Overall | |
|---|---|
| **Pass Rate** | 46% |
| **Average Mark** | 46% |
| **Range of Marks** | **Nos. of Students** |
| 0-39 | 70 |
| 40-49 | 39 |
| 50-59 | 47 |
| 60-69 | 35 |
| 70 and over | 10 |
| **Total No. Sitting Exam** | **201** |
| **Total Absent** | 28 |
| **Total Approved Absent** | 8 |
| **Total No. Applied for Exam** | 237 |

**General Comment**

The overall performance at this session of the 2nd Year Management Accounting examination was below the standard of the summer session although higher than the corresponding session last year. The average mark recorded at this session was 46 and the Pass Rate was 46%.

The examination assessed all aspects of the syllabus and most candidates made an attempt at the required 5 questions. In terms of performance for individual questions – the questions on cashflow projection calculations (Question 1) and variance analysis

(Question 4) attracted the highest marks, while performance in the break-even an question was particularly poor.
The format comprised of a compulsory section with three scenario based, largely computational type questions assessing the application of key concepts of the syllabus in practical situations; and a second section where the candidate was required to answer 2 out of 3 questions, which included a mainly narrative question together with other computational/theory questions.

While there were some very good scripts submitted, in general terms it was evident that more thorough revision of key syllabus areas would have benefitted candidates. Presentation and layout of solutions also varied from very good to poor.

**Question 1**

This question examined the area of budgetary planning and control through the preparation of a cash budget and some relevant discussion. Marks were lost for a variety of errors in relation to receivables, payables, the treatment of depreciation, insurance and other overheads. The capital expenditure payment and loan repayment was largely correct, but the treatment of dividend income varied. The most concerning issue was the fact that quite a number of scripts made reference to profits/losses rather than cashflows. Part (c ) required recommendations to be suggested to the company and a number of candidates advised that they should close immediately rather than making suggestions to improve cashflows. Layout could have been improved in some instances.

**Question 2**

This question examined traditional overhead apportionment and absorption costing though many candidates approached it as an activity based costing question or did not carry out the service department apportionment and hence the average mark is relatively low. The job costing requirement of part (b) often saw the omission of direct labour costs, although most were able to correctly perform the margin pricing exercise. The short narrative section was answered satisfactorily.

**Question 3**

This question examined the marginal costing technique of breakeven analysis and required a number of calculations to be presented, as well as practical application in a decision making scenario. As in recent previous sessions, this syllabus area was not well answered. Many candidates produced an incorrect contribution or profit calculation as the solution to part (a) or calculated a breakeven point using a contribution-calculated as the sales value less variable overhead cost, ignoring materials and labour, or attempted to calculate the breakeven using fixed costs divided by the sales figure. In part (b) the margin of safety definition provided was in many cases the breakeven definition. As a result of the obvious lack of know demonstrated in the basic calculations, inevitably the solutions to part (c) were equa poor, although the majority did identify that the new option would be less profitable and were awarded marks accordingly. Part (d) was a simple requirement which was specifically covered in the manual, but it was evident that appropriate revision had not been completed in some cases.

**Question 4**

It was encouraging that the variance analysis question was the best answered on the paper. Very few presented flexed budget figures as required in part (a) and errors in part (b) related to the impact of the flexed quantity in relation to Materials Usage and Labour Efficiency. Answers to part (c) was generally good although not all candidates attempted this part

**Question 5**

This was a straightforward narrative type question, with a similar format to previous sessions, requiring a briefing note on a number management accounting terms. This was the least popular question of the paper and while there were a small number of good answers, the majority of answers submitted were poor. Some definition were simply incorrect, invented or extremely brief. In order to score well, candidates needed to provide a clear definition, supported by a relevant example and the fact that this was not the case in most cases evidenced a lack of preparation.

**Question 6**

This question examined management accounting systems with the requirement of an activity based costing calculation and narrative section linking this to control theory, which is covered in the nature of management accounting. Most made a good attempt at the first requirement, although the standard of workings varied. The low overall mark results from the fact that many did not attempt the narrative section and some who did produced very poor answers to part (b).