

## **Cost Accounting Level 3**



International  
Qualifications from EDI

### **Model Answers** Series 2 2011 (3017)

# Cost Accounting Level 3

## Series 2 2011

### How to use this booklet

Model Answers have been developed by EDI to offer additional information and guidance to Centres, teachers and candidates as they prepare for LCCI International Qualifications. The contents of this booklet are divided into 3 elements:

- (1) Questions – reproduced from the printed examination paper
- (2) Model Answers – summary of the main points that the Chief Examiner expected to see in the answers to each question in the examination paper, plus a fully worked example or sample answer (where applicable)
- (3) Helpful Hints – where appropriate, additional guidance relating to individual questions or to examination technique

Teachers and candidates should find this booklet an invaluable teaching tool and an aid to success.

EDI provides Model Answers to help candidates gain a general understanding of the standard required. The general standard of model answers is one that would achieve a Distinction grade. EDI accepts that candidates may offer other answers that could be equally valid.

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## QUESTION 1

A company produces a single product; The Company uses standard costing and has produced the following budgeted and actual Manufacturing and Trading accounts for a period.

### Budgeted Manufacturing and Trading Account

Sales and production units		310
	£	£
Sales		18,600
Variable costs	10,540	
Fixed overheads	4,960	
Standard cost		<u>15,500</u>
Gross profit		<u>3,100</u>

### Actual Manufacturing and Trading Account

Sales and production units		300
	£	£
Sales		18,750
Variable costs	10,490	
Fixed overheads	4,760	
Actual cost		<u>15,250</u>
Gross profit		<u>3,500</u>

The following information has also been provided:

Fixed overheads are absorbed at a predetermined rate based on direct labour hours.  
Standard direct labour, is 2 hours per unit.  
Actual direct labour worked was 560 hours.

## REQUIRED

- (a) Calculate the following variances for the period:
- (i) sales price
  - (ii) sales volume (profit)
  - (iii) total cost.
- (6 marks)
- (b) Reconcile the budgeted gross profit with the actual gross profit using the variances calculated in part (a).
- (2 marks)
- (c) Calculate the following fixed overhead variances for the period
- (i) expenditure
  - (ii) volume
  - (iii) capacity
  - (iv) efficiency.
- (8 marks)
- (d) Briefly describe and appraise how ideal and attainable standards may be used as the basis for a standard costing system.
- (4 marks)

**(Total 20 marks)**

## MODEL ANSWER TO QUESTION 1

### Syllabus Topic 5: Standard costing and variances (5.1, 5.3, 5.11, 5.12 and 5.14)

#### (a) Sales and cost variances

Sales price variance	$(300 \times £60) - £18,750$	=	£750F	1
Sales volume (profit) variance	$(310 - 300) \times 10$	=	£100A	1
Total cost variance	$(300 \times 50) - 15,250$	=	£250A	1

Workings:

Budgeted standard price per unit	$£18,600/310$	=	£60	1
Budgeted standard profit per unit	$£3,100/310$	=	£10	1
Budgeted standard cost per unit	$£15,500/310$	=	£50	1

(6 marks)

#### (b) Profit reconciliation

	£	£
Budgeted Profit		3,100 <sup>1/2</sup>
Sales price variance	750F	
Sales volume (profit) variance	100A	
Total cost variance	250A	<u>400F</u> 1
Actual profit		<u>3,500</u> <sup>1/2</sup>

(2 marks)

#### (c) Fixed overhead variance

		£
(i) Expenditure variance	$£4,760 - £4,960$	200F 1
(ii) Volume variance	$£4,960 - (300 \times 2 \times £8)$	160A 2
(iii) Volume capacity variance	$(310 \times 2 - 560) \times £8$	480A 2
(iv) Volume efficiency variance	$(300 \times 2 - 560) \times £8$	320F 2

Workings:

$$\text{Overhead absorption rate} = £4,960 / (310 \times 2) = £8 \text{ per direct labour hour} \quad 1$$

(8 marks)

#### (d)

**Ideal** standards, are performance standards, that can only be achieved under perfect operating conditions, i.e. Maximum efficiency making no allowance for losses, waste etc. Such standards are unlikely to be achieved and may as a consequence be de-motivational. 2

**Attainable** standards, are performance standards, that assumes efficient levels of operation but makes some allowance, where appropriate, for losses, waste etc. Such standards are commonly adopted as they can be seen to be achievable with effort and thus may provide motivation to improve 2

(4 marks)

**(Total 20 marks)**

## QUESTION 2

Trueflow Ltd produces a single product in a continuous process.

The following information is available for month 3, Year 11

	<b>Kg</b>	<b>£</b>
Opening stock of work-in-progress (70% complete with respect to conversion costs)	1,000	7,400
Material introduced	9,000	51,390
Conversion costs		17,060
Output to finished goods	8,500	
Closing stock of work-in-progress (60% complete with respect to conversion costs)	800	

Normal scrap loss was 5% of materials introduced during this period. All scrap was sold at £0.20 per kg.

### REQUIRED

For month 3, Year 11:

- (a) Calculate costs per unit for each element of cost. (6 marks)
- (b) Prepare the process account showing both quantities and values. (8 marks)
- (c) Prepare the normal and the abnormal loss/gain accounts. (6 marks)

**(Total 20 marks)**

**MODEL ANSWER TO QUESTION 2**

**Syllabus Topic 2: Costing methods and systems (2.3, 2.4 & 2.5)**

(a)

**Table of equivalent units**

	Finished Stock (kg)	Abnormal Loss (kg)	Closing Stock (kg)	Opening Stock (kg)	Equivalent Units	Cost (£)	Unit Cost (£)	
Material	8,500	250	800	(1,000)	8,550	51,300	6	<b>3</b>
Conversion	8,500	250	480	(700)	8,530	17,060	<u>2</u>	
Total							<u>8</u>	<b>3</b>

Workings

Abnormal loss = 1,000 + 9,000 - 8,500 - 800 - 450 = 250kg  
 Material cost = Cost of material introduced - Normal scrap sale  
 = 51,390 - 90 = £51,300

(6 marks)

(b)

**Process Account**

	Units	Cost (£)		Units	Cost (£)	
Open WIP	1,000	7,400	Fin goods	8,500	68,000	<b>3</b>
Material	9,000	51,390	Normal loss	450	90	<b>2</b>
Conversion		17,060	Abnormal loss	250	2,000	<b>1</b>
			Closing WIP	800	5,760	<b>2</b>
	<u>10,000</u>	<u>75,850</u>		<u>10,000</u>	<u>75,850</u>	

Workings:

Cost of closing work in progress (800 x 6.00) + (480 x 2) = £5,760

Cost of opening work in progress completed 7,400 + [(1,000-700) x 2] = £8,000

Finished goods

Cost of opening stock completed + Cost of output wholly processed  
 8,000 + [(8,500 - 1,000) x 8] = £68,000

Abnormal loss  
 250 x 8 = £2,000

(8 marks)

(c)

**Normal loss Account**

Process Account	90	Bank	140
Abnormal Loss	<u>50</u>		
	<u>140</u>		<u>140</u>

**3**

**Abnormal loss Account**

Process Account	2,000	Normal loss	50
	<u>2,000</u>	Profit & Loss Account	<u>1,950</u>
			<u>2,000</u>

**3**

(6 marks)

**(Total 20 marks)**

### QUESTION 3

Triple Products Ltd, which manufactures and sells three products (A, B, & C), has presented the following budget details for the next period.

	A	B	C
Sales (units per period)	3,000	2,500	5,000
Selling price (per unit)	£20	£24	£16
Variable cost (per unit)	£12	£12	£10
Fixed costs (per unit)	£5.10	£3.80	£2.60

#### REQUIRED

- (a) Calculate:
- (i) the contribution to sales ratio for each product and for Triple Products overall (5 marks)
  - (ii) the budgeted profit for the period (2 marks)
  - (iii) the break-even revenue based on the budgeted sales mix. (2 marks)
- (b) Draw a profit-volume chart for the budgeted sales mix. Indicate clearly on the chart the break-even revenue, the margin of safety, the fixed cost and the maximum profit. (8 marks)

The company is considering installing new production facilities. These facilities will increase the present output and increase total fixed cost to £55,000.

- (c) Calculate the sales revenue required, based on the budgeted sales mix, to achieve a net profit of £50,000. (3 marks)

**(Total 20 marks)**

**MODEL ANSWER TO QUESTION 3**

**Syllabus Topic 3: Cost-volume-profit analysis (3.1, 3.2, 3.4 & 3.5)**

(a) (i)

	<b>A</b>	<b>B</b>	<b>C</b>	<b>Total</b>
	£000	£000	£000	£000
Sales	60	60	80	200
Variable Cost	<u>36</u>	<u>30</u>	<u>50</u>	<u>116</u>
Contribution	24	30	30	84
Contribution to sales ratio	<b>40%</b>	<b>50%</b>	<b>37.50%</b>	<b>42%</b>
	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>

(5 marks)

(ii)

Fixed cost =  $3,000 \times £5.1 + 2,500 \times £3.8 + 5,000 \times £2.6$   
 = £37,800 **1**

Budgeted profit = Contribution - Fixed cost  
 =  $84,000 - 37,800$   
 = **£46,200** **1**

(2 marks)

(iii)

Break-even revenue = Fixed costs / Overall contribution ratio  
 $£37,800 / 0.42$   
 = **£90,000**

(2 marks)

(b) See chart (overleaf)

(8 marks)

(c) Profit = Contribution - Fixed cost  
 £50,000 = Contribution - £55,000  
 Contribution = £105,000 **1**

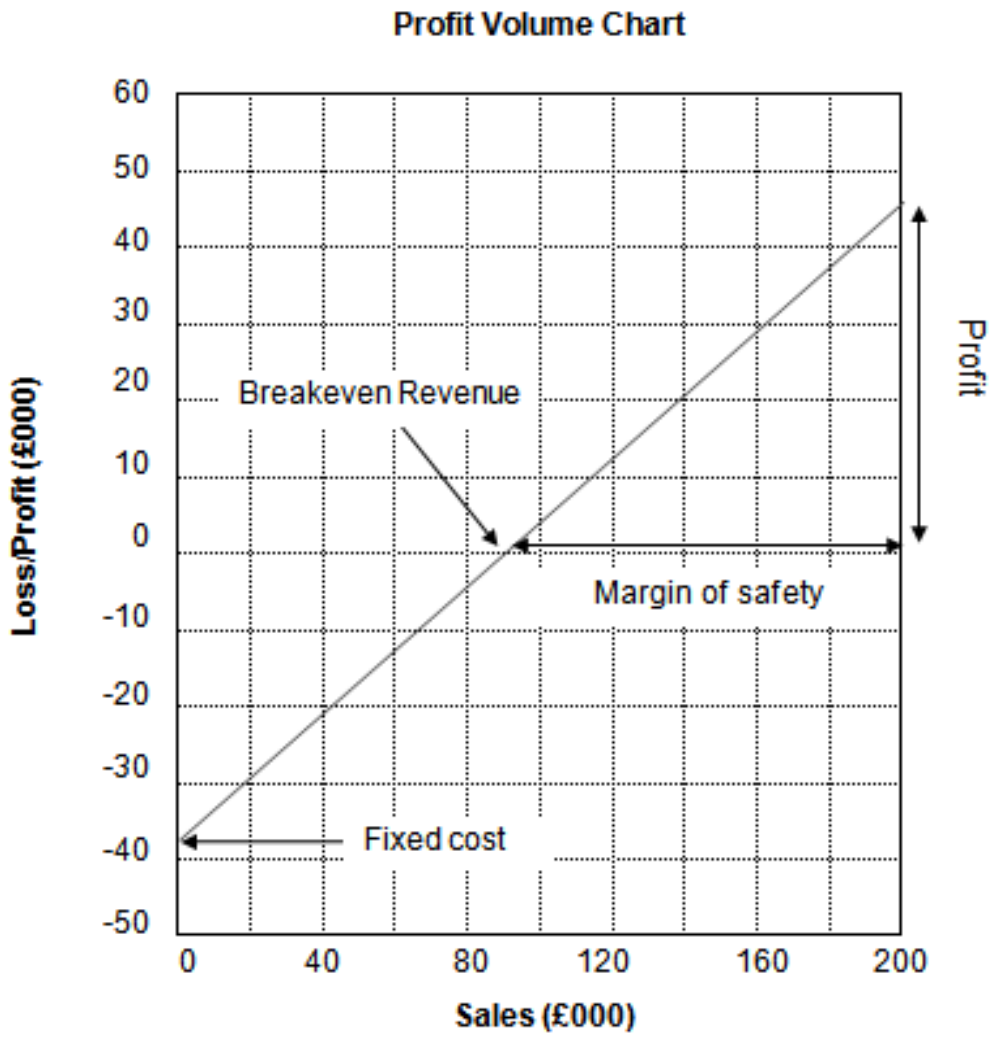
Sales = Contribution / Contribution to sales ratio **1**  
 Sales =  $£105,000 / 0.42$   
 Sales = **£250,000** **1**

(3 marks)

**(Total 20 marks)**



QUESTION 3 CONTINUED



**Marks**

Title	1	Profit	1
Labels	1	Fixed cost	1
Breakeven Point	1	Line	2
Margin of safety	1		

#### QUESTION 4

Sole Products Ltd, which buys and sells a single product, has prepared the following summarised Profit & Loss budgets for the period January to April, Year 11.

	January £'s	February £'s	March £'s	April £'s
Sales	160,000	170,000	180,000	190,000
Cost of sales	<u>96,000</u>	<u>102,000</u>	<u>108,000</u>	<u>114,000</u>
Gross profit	64,000	68,000	72,000	76,000
Wages	17,600	19,800	22,000	24,200
Depreciation	6,000	6,000	6,000	6,000
Other overheads	<u>22,000</u>	<u>22,500</u>	<u>23,000</u>	<u>24,000</u>
Net Profit	<u>18,400</u>	<u>19,700</u>	<u>21,000</u>	<u>21,800</u>

The following additional information for the period is available:

- (i) 10% of the sales are for cash; credit sales are paid in month after sale
- (ii) Product purchases are paid for in the month following purchase
- (iii) Stock of product (at cost) is expected to be:

End of January	£21,000
End of February	£24,000
End of March	£26,000
End of April	£27,000

- (iv) Wages are made up of a basic piece rate plus a 10% bonus. The basic piece rate wage is paid in the month incurred and the bonus is paid the following month
- (v) 60% of the other overheads are paid in the month they are incurred the remainder being paid the following month
- (vi) Capital expenditure of £35,000 and £20,000 is forecast for January and April
- (vii) The following balances are expected at the beginning of January year 11.

Stock of products	£19,000
Debtors	£140,000
Creditors	£80,000
Wages accrued	£1,000
Overheads accrued	£8,000
Bank	£10,000 overdrawn

#### REQUIRED

- (a) Prepare the cash budget for each of the four months January to April, year 11. (16 marks)
- (b) State **two** advantages of having a cash budget. (4 marks)

**(Total 20 marks)**

**MODEL ANSWER TO QUESTION 4**

**Syllabus Topic 4: Budgetary Planning: (4.4 & 4.5)**

(a)

**Cash Budget**

	Jan	Feb	March	April	
<b>Receipts</b>					
Sales	<u>156,000</u>	<u>161,000</u>	<u>171,000</u>	<u>181,000</u>	<b>2</b>
<b>Payments</b>					
Product Purchase	80,000	98,000	105,000	110,000	<b>4</b>
Wages	17,000	19,600	21,800	24,000	<b>4</b>
Other overheads	21,200	22,300	22,800	23,600	<b>2</b>
Capital expenditure	<u>35,000</u>			<u>20,000</u>	
	<u>153,200</u>	<u>139,900</u>	<u>149,600</u>	<u>177,600</u>	<b>1</b>
Net cash flow	2,800	21,100	21,400	3,400	<b>2</b>
Opening balance	(10,000)	(7,200)	13,900	35,300	
<b>Closing balance</b>	<b><u>(7,200)</u></b>	<b><u>13,900</u></b>	<b><u>35,300</u></b>	<b><u>38,700</u></b>	<b>1</b>

Workings

	Jan	Feb	March	April
<b>Receipts</b>				
Sales (credit)	140,000	144,000	153,000	162,000
Sales (cash)	<u>16,000</u>	<u>17,000</u>	<u>18,000</u>	<u>19,000</u>
Sales	<u>156,000</u>	<u>161,000</u>	<u>171,000</u>	<u>181,000</u>

<b>Product Purchase</b>			
Cost of sales	96,000	102,000	108,000
Less opening stock	(19,000)	(21,000)	(24,000)
Add closing stock	<u>21,000</u>	<u>24,000</u>	<u>26,000</u>
Product purchase	<u>98,000</u>	<u>105,000</u>	<u>110,000</u>

January payment = £80,000 (Creditors at start of month)

<b>Accrued bonus</b>	1,000	1,600	1,800	2,000
Basic	<u>16,000</u>	<u>18,000</u>	<u>20,000</u>	<u>22,000</u>
Payments made	<u>17,000</u>	<u>19,600</u>	<u>21,800</u>	<u>24,000</u>

Basic for Jan = £17,600 / 110% = £16,000

<b>Other overheads</b>				
Accrued (40%)	8,000	8,800	9,000	9,200
Incurred (60%)	<u>13,200</u>	<u>13,500</u>	<u>13,800</u>	<u>14,400</u>
Payments made	<u>21,200</u>	<u>22,300</u>	<u>22,800</u>	<u>23,600</u>

(16 marks)

(b) Any two from

- (i) Cash shortages revealed early and arrangements can be made for overdraft on best terms
- (ii) Cash surpluses revealed and can be planned to be invested
- (iii) Required when applying for loan/overdraft

(4 marks)

**(Total 20 marks)**

### QUESTION 5

Makeit Ltd uses a non-integrated accounting system. For the year ended 31 December Year 10 the cost accounts showed a profit of £90,630, and the financial account showed a profit of £100,000.

#### REQUIRED

- (a) Define a non-Integrated accounting system.

(2 marks)

Investigations revealed the following differences between the cost and financial accounts:

- |                  |                  | <b>Cost<br/>Accounts<br/>£</b> | <b>Financial<br/>Accounts<br/>£</b> |
|------------------|------------------|--------------------------------|-------------------------------------|
| Opening stocks - | Raw materials    | 15,700                         | 14,150                              |
|                  | Work-in-progress | 9,620                          | 10,740                              |
|                  | Finished goods   | 14,640                         | 15,500                              |
| Closing stocks - | Raw materials    | 12,750                         | 12,420                              |
|                  | Work-in-progress | 10,880                         | 11,840                              |
|                  | Finished goods   | 15,620                         | 15,050                              |
- (2) Depreciation was included in the cost accounts at £19,000 but in the financial accounts it was £18,000.
- (3) Dividends received were £3,900.
- (4) Discount allowed was £1,200 and discount received was £1,100.
- (5) The cost accounts included a notional charge of £5,000 for rent.
- (6) Production overheads had been under-absorbed by £380 and Administration overheads over-absorbed by £320 in the cost accounts. These amounts had not been written off against the cost accounts profit.

#### REQUIRED

- (b) Prepare a statement reconciling the cost accounts profits to the financial accounts profits for the year ended 31 December Year 10. You should begin your statement with the cost accounts profit.

(14 marks)

- (c) Explain the meaning of Notional Cost.

(2 marks)

- (d) Suggest a reason why the depreciation charges are different in the two sets of accounts.

(2 marks)

**(Total 20 marks)**

## MODEL ANSWER TO QUESTION 5

### Syllabus Topic 6: Accounting systems (6.1 & 6.6)

(a) **Non-integrated accounting system**

A system that keeps both a financial and a cost account. The accounts being kept in agreement by use of control accounts or reconciled by other means.

(2 marks)

(b) **Reconciliation statement:**

Profit as per cost accounting			90,630
<b>Add differences in stock valuation</b>			
Opening Raw materials	1,550		
Closing Work-in-progress	960		
<b>Less differences in stock valuation</b>			
Opening work-in-progress		1,120	
Opening Finished goods		860	
Closing Raw material		330	
Closing Finished goods		570	
<b>Add</b>			
Difference in depreciation	1,000		
Dividends	3,900		
Discount received	1,100		
Notional rent charge	5,000		
Administration overhead over-absorbed	320		
<b>Less</b>			
Discount allowed		1,200	
Production overhead under-absorbed		<u>380</u>	
	<u>13,830</u>	<u>4,460</u>	<u>9,370</u>
Profit as per financial accounts			<u>100,000</u>

(14 marks)

(c) **Notional Cost:**

A notional cost or charge represents the charge of using a resource which has no actual cost.

(d) **Depreciation:**

Different methods to calculate the depreciation could have been used.

For example, Cost Accounting could have used reducing balance whereas Financial Accounting could have used the straight line method

(2 marks)

**(Total 20 marks)**

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