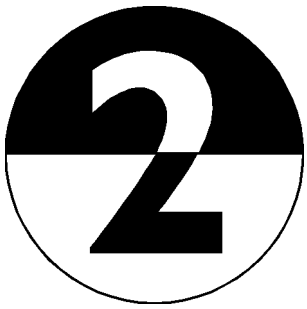
EXAMINATIONS BOARD

Cost Accounting



Level 2

Series 3 2003

(Code 2016)

Model Answers

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Cost Accounting Level 2
Series 3 2003

How to use this booklet

Model Answers have been developed by LCCIEB to offer additional information and guidance to Centres, teachers and candidates as they prepare for LCCIEB examinations. 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.

The London Chamber of Commerce and Industry Examinations Board provides Model Answers to help candidates gain a general understanding of the standard required. The Board accepts that candidates may offer other answers that could be equally valid.

Cost Accounting Level 2
Series 3 2003

QUESTION 1

Control of materials results from the provision of adequate information about their ordering, receipt, storage and use. The provision of materials involves a cycle of events from the time when stocks are running low to the time when materials are used in production departments.

REQUIRED

(a) Describe **each** of the following documents and explain their purpose and use:

(i) Purchase requisition

(ii) Purchase order

(iii) Goods received note

(iv) Invoice

(v) Delivery note.

(15 marks)

(b) Identify **5** different types of stock-carrying costs.

(5 marks)

(Total 20 marks)

Model Answer to Question 1

(a) (i) **Purchase requisition**
An internal instruction to a buying office to purchase goods or services, stating their quantity and description and generating a purchase order.

(ii) **Purchase order**

A written order for goods or services specifying quantities, prices, delivery dates and contract terms.

(iii) **Goods received note**

A record of goods at the point of receipt specifying quantities received against the purchase order and supporting document for payment of invoice.

(iv) **Invoice**

A document prepared by a supplier showing the description, quantities, prices and values of goods delivered or services rendered. To the supplier this is a sales invoice, to the purchaser the same document is a purchase invoice.

(v) **Delivery (advice) note**

A document containing details of the quantity and specifications of accompanying goods. Signed copy acts as proof of delivery.

(b) **Stock-carrying costs**

Any 5 from

- finance
- space
- special storage conditions
- salaries and wages
- security
- insurance
- various types of stock loss

Other reasonable types accepted

QUESTION 2

A importer and distributor of one type of microwave oven has the following transactions in his records:

Date	Purchases		Sales	
	Units	Unit cost £	Units	Unit Selling Price £
12 January	20	81	–	–
19 January	60	70	–	–
31 January	30	82	50	140
9 February	50	85	–	–
21 February	30	85	–	–
28 February	20	94	100	140

The opening stock on 1 January was 20 units, which cost £80 each.

For updating stock records and monthly accounting routines, all issues are priced on the last day of each month.

The physical stock at the end of January agreed with the book stock record but a similar check at the end of February revealed a deficit of four units assumed stolen.

Fixed costs of administration, selling and distribution amount to £2,000 per month, variable selling and distribution costs are 10% of sales.

The company prepares monthly Profit & Loss Accounts.

REQUIRED

(a) Calculate the month end stock valuations for January and February which would arise from pricing out monthly issues by **each** of the following methods:

(i) FIFO
(ii) LIFO
(iii) Weighted average.

(12 marks)

(b) Prepare a Profit & Loss Account for February using the valuations based on the Weighted Average method.

(8 marks)

(Total 20 marks)

Model Answer to Question 2

Closing stocks

(a)	(i) **FIFO**			(ii) **LIFO**			(iii) **Weighted Average**
January	**Units**	**£/unit**	**£**	**Units**	**£/unit**	**£**	
	50 x	70 =	3,500	20 x	80 =	1,600	£9,880* ÷ 130 units
	30 x	82 =	2,460	20 x	81 =	1,620	= £76 per unit
				40 x	70 =	2,800	
	80		5,960	80		6,020	80 x 76 = £6,080

Workings Weighted Average

January*		**February****	
20 x £80 =	£1,600	50 x £85 =	£4,250
20 x £81 =	£1,620	30 x £85 =	£2,550
60 x £70 =	£4,200	20 x £94 =	£1,880
30 x £82 =	£2,460	100	£8,680
130	£9,880		

	FIFO			**LIFO**		**Weighted Average**		
February	**Units**	**£/unit**	**£**	**Units**	**£**	**Units**		**£**
	30 x	85 =	2,550	No change				£6,080 + £8,680**
	30 x	85 =	2,550	as above				180
	20 x	94 =	1,880				=	£82 per unit
	80		6,980	80	6,020	80	x	£82 = £6,560
Stock loss	(4)	at £85 =	(340)	(4) at £70 =	(280)	(4) at £82 =		£328***
	76		6,640	76	5,740	76		£6,232

(b) **Profit & Loss Account for February**

	£	**£**
Sales 100 at £140 =		14,000
Cost of sales (100 units at £82 per unit)		8,200
Gross profit		5,800
Less		
Selling and distribution	1,400	
Fixed costs	2,000	
Abnormal loss***	328	3,728
Net profit		2,072

*** W1**
**** W2**
*** **W3**

QUESTION 3

A company makes a single product. The direct labour operation involves three skilled machine operators who are currently paid on a time rate basis of £5.60 per hour worked. Two alternative methods for their remuneration are under consideration. These are as follows:

(i) A piece rate of £1.40 per unit (with the time rate of £5.60 per hour guaranteed).
(ii) A rate of £5.60 per hour worked plus a group incentive bonus based on the total output of the three operators in relation to a productivity index of 100. The index of 100 is based on an expected output of 480 units for a full 40-hour week for the group. A bonus of 50% of the groups productivity index in excess of 100 will be added as a percentage to the basic hourly rate for the actual hours worked.

Factory records contained the following data for one week's output:

	OPERATORS		
	A	**B**	**C**
Units produced	160	140	206
Hours worked	36	39	40

REQUIRED

Calculate the gross wage payable to each machine operator for the week based upon the present time rate method and **each** of the two alternative methods.

(20 marks)

Model Answer to Question 3

			£	
Time rate	A	36 x £5.60 =	201.6	
	B	39 x £5.60 =	218.4	
	C	40 x £5.60 =	224.0	
Piece rate	A	160 units x £1.4 =	224.0	
	B	140 units x £1.4 =	196.0	
		∴ guaranteed time rate =	218.4	payable
	C	296 units at £1.4 =	288.4	

480 units from 40 hours = 12 units per hour = 4 units per man/hour
= 100 index

Actual productivity 506 units in 115 hours=4.4 units per man/hour

$$= \frac{506}{115 \times 4} = \frac{506}{460} \times 100 = 110 \text{ index}$$

Or $\frac{4.4}{4} \times 100 = 110$ index

Bonus ∴ 50% of (110-100) = 5%

	A	**B**	**C**
Gross pay	**£**	**£**	**£**
Basic as in 1	201.60	218.40	224.00
add Bonus 5%	10.08	10.92	11.20
Total	211.68	229.32	235.20

QUESTION 4

A company passes a raw material through two processes to make a single product.

Actual data for Month 3 is as follows:

Process 1
Material input: 3,000 units at £2.00 per unit
Conversion costs: £5,400
Output to Process 2: 2,650 units.

Process 2
Conversion costs: £7,068
Finished product: 2,300 units.

There is no opening or closing work-in-progress in either process. Rejects are expected as follows:

	Process 1	**Process 2**
Normal rejects	5% of input	8% of input
Scrap value of reject units	£1.52 per unit	£1.84 per unit

REQUIRED

(a) Prepare the Process Account for each process for Month 3.

(14 marks)

(b) Calculate the charge to the Profit & Loss Account in respect of any abnormal losses or gains for Month 3.

(6 marks)

(Total 20 marks)

Model Answer to Question 4

(a)

Process 1 Account

	Units	£		Units	£
Materials	3,000	6,000 ½	Normal loss	150	228
Conversion		5,400 ½	Process 2	2,650	10,388
			Abnormal loss	200	784
	3,000	11,400		3,000	11,400

Cost per unit £11,400 – £228 = £11,172 ÷ 2,850 = £3.92

Process 2 Account

	Units	£		Units	£
Process 1	2,650	10,388	Normal loss	212	390
Conversion		7,068	Finished goods	2,300	16,100
			Abnormal loss	138	966
	2,650	17,456		2,650	17,456

Cost per unit £17,456 – £390 = £17,066 ÷ 2,438 = £7.00

(b) Abnormal loss to Profit & Loss Account

	£	£
Ex Process 1	784	
Ex Process 2	966	
	1,750	1,750
Less scrap value proceeds	£	£
Process 1 200 at £1.52 =	304	
Process 2 138 at £1.84 =	254	558
		1,192

QUESTION 5

The trading results (for year 2002) for a company manufacturing and selling a single product were as follows:

	£000	£000
Sales		1,080
Costs:		
Direct materials	384	
Direct labour	180	
Indirect labour	67	
Other overheads	190	821
Profit		259

120,000 units were produced and sold during the period.

The following matters should be taken into consideration for Year 2003:

(1) The company plans to increase units produced and sold by 25%. The unit selling price will be reduced by £0.50.
(2) All direct labour employees will receive a 5% increase in their hourly rate for all hours worked. The 25% increase in output will be achieved by a 10% increase in hours worked.
(3) No increase is planned for indirect labour costs.
(4) Other overhead for year 2002 included £40,000 fixed costs and these will increase by £7,000. The balance of the other overhead costs varies in proportion to output.
(5) Direct material price will decrease by 2.5%.

REQUIRED

Prepare an estimate of the trading results for the Year 2003 in the same format as shown above. (All workings should be clearly shown.)

(20 marks)

Model Answer to Question 5

Trading Results for Year 2003

	£	£
Sales		1,275,000
***Less* costs:**		
Direct materials	468,000	
Direct labour	207,900	
Indirect labour	67,000	
Other overheads	234,500	
		977,400
Profit		297,600

Workings

Revised sales 120,000 units x $\frac{125}{100} = 150{,}000$ units

Revised Selling Price

$\frac{£1{,}080{,}000}{120{,}000}$ = £9 **–** £0.5 = £8.5

Revised Sales Value

150,000 x £8.5 = 1,275,000

Materials Revised Price

$\frac{£384{,}000}{120{,}000} = £3.2 \text{ x } 0.975 = £3.12 \text{ per unit}$

OR Direct materials cost =

£384 000 x 1.25 x 0.975=£468 000

Revised cost

150,000 x £3.12 = £468,000

Direct Labour Cost

£180,000 x 1.1 x 1.05 = £207,900

Other overheads

Variable overhead £190,000 **–** £40,000 = £150,000

Variable overhead per unit $\frac{£150{,}000}{120{,}000} = £1.25$

OR

£150 000 x 1.25 = £187 500

Revised variable overhead cost 150,000 x 1.25 = £187,500 =

Fixed overhead

£40,000 + £7,000 = £47,000 =

Total other overheads = £234 500 (£187 500 + £47 000)

QUESTION 6

A company operates a standard costing system. The standard variable production cost per unit of Product X is as follows:

	£
Direct materials 2 kg at £2.3 per kg	4.60
Direct labour 0.7 hours at £5 per hour	3.50
Variable overhead	1.30
Standard variable production cost per unit	9.40

The following information is available for the period just ended:

(1) Stock valuations of Product X at standard variable production cost:

Opening £121,025
Closing £140,060

(2) Standard variable production cost of sales: £263,529

(3) Direct material price variance £1,180 Adverse.

(4) Actual direct materials cost: £137,386.

(5) No raw material stock is held.

REQUIRED

(a) Calculate for the period just ended:

(i) the total standard variable cost of finished goods produced (4 marks)

(ii) the actual number of units of finished goods produced (2 marks)

(iii) the direct materials usage variance (4 marks)

(iv) the actual kilograms of direct material used (4 marks)

(v) the actual price per kilogram. (2 marks)

(b) Suggest **one** possible reason for **each** of the direct materials variances. (4 marks)

(Total 20 marks)

Model Answer to Question 6

(a) (i) **The standard variable cost of finished goods produced**

	£
Standard variable cost of sales	263,529
Add closing stock at standard	140,060
	403,589
Less opening stock at standard	121,025
Standard variable production costs	282,564

(ii) **Actual units produced**

£282,564 = 30,060 units
£9.4

(iii) **Direct materials usage variance**

Standard cost of materials (30,060 x £4.6)	138,276	
Actual cost of materials	137,386	
Materials cost variance	890	Fav
Add materials price variance	1,180	Adv
Materials usage variance	2,070	Fav

(iv) **Actual kilograms used**

Standard kilograms 30,060 units x 2 kg	=	60,120 kg
Less fav usage £2,070 ÷ 2.3	=	900 kg
Actual kilograms used	=	59,220

Alternative Answer:

Actual cost £137,386 – Adverse price 1,180 = £136,206 = 2.3 = 59,220

(v) **Actual price per kilogram**

£137,386 ÷ 59,220 = £2.32

(b) Appropriate reasons 2 x 2 marks each
Better quality materials (adverse price variance)
Greater yield from material than planned/lower rate of scrap than anticipated (favourable usage variance)

Other reasonable points accepted.

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