Cost Accounting Level 3

Model Answers

Series 3 2013 (ASE3017)

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Level 3 Cost Accounting
Series 3 2013

How to use this booklet

Model Answers have been developed 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.

Pearson 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. Pearson accepts that candidates may offer other answers that could be equally valid.

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LCCI IQ SERIES 3 EXAMINATION 2013
COST ACCOUNTING
LEVEL 3
MARKING SCHEME

DISTINCTION MARK 75%
MERIT MARK 60%
PASS MARK 50%

TOTAL 100 MARKS

QUESTION 1
Syllabus Topic 1: Materials and stock control (1.2, 1.4, 1.5 and 1.6)

(a)

Order size (units)	No of orders	Ordering costs £	Average stock (units)	Holding costs £	Total costs £
1,000	12	3,000	500	750	3,750
2,000	6	1,500	1,000	1,500	3,000
4,000	3	750	2,000	3,000	3,750
6,000	2	500	3,000	4,500	5,000
12,000	1	250	6,000	9,000	9,250
	(1)	(1)of	(1)	(1)of	(1)of

Total cost must include holding and ordering cost to be awarded
Deduct one total mark for each missing order size

Optimum order size = 2,000 units (1) of

(6 marks)

(b) EOQ = $\sqrt{\frac{2\,CoD}{Ch}}$ (1) If answer incorrect, formula mark can be awarded if costs described

= $\sqrt{\frac{2 \times 12{,}000 \times 250}{12 \times 0.125}}$ (2)

= 2,000 units (1) of

(4 marks)

(c) **Stock holding costs**
Any two of the following:
Insurance, Material handling, Storekeeper's salary, Interest, Rent (2)

Ordering costs
Any two of the following:
Paperwork, Postage, Telephone, Internet, Email, Purchasing officer's salary, Import. Delivery costs (2)

(4 marks)

(d) **Options available**

Order size	1,000	2,000	4,000	6,000	12,000	
Number of orders	12	6	3	2	1	
Component price (£)	12.00	12.00	11.40	11.40	11.10	(1)

Costs(£'s)

Ordering	3,000	1,500	750	500	250	(1)
Stock holding	750	1,500	2,850	4,275	8,325	(2)
Components	144,000	144,000	136,800	136,800	133,200	(1)of
	147,750	147,000	140,400	141,575	141,775	

Advice
Order 4,000 components at the discounted price of £11.40 three times a year.
This minimises the total annual costs to £140,400 (1) of only awarded if the three costs involved

Workings
Stock holding at 4,000
= 4,000/2 x £11.40 x 12.5% = £2,850

Deduct one total mark for each missing order size
(6 marks)

(Total 20 marks)

QUESTION 2
Syllabus Topic 2: Costing methods and systems (2.9 and 2.10)

(a) Cost of production (second quarter)

	Tee (£000's)	Pee (£000's)	
Material	176	410	
Labour	176	492	
Variable overhead	22	41	
Total variable cost	374	943	(1)of
Fixed overhead	44	123	(1)of
Total cost of production	418	1,066	

Workings:

Fixed overhead
Absorption rate = Budgeted overheads for year/total labours for year
= £650,000 / 260,000 = £2.50 per direct labour hour
Fixed overhead Tee = 4,400 x 4 x £2.50 = £44,000
Fixed overhead Pee = 8,200 x 6 x £2.50 = £123,000

(i) **Profit Statement (Absorption costing)**

	Tee (£000's)		Pee (£000's)		
Sales		600		1,600	
Opening stock	95		78		(2)of
Cost of production	418		1,066		
Less closing stock	38		104		(2)of
Production cost of sales		475		1,040	
Profit		125		560	

Total Profit (both products)	685,000	
Add over absorption (1)	4,500	(1)
Final absorption profit	**£689,500**	(1)of

Workings:
Opening stock (Tee) 1,000 x (£418,000/4,400) = £95,000
Opening stock (Pee) 600 x (£1,066,000/8,200) = £78,000
Closing stock (Tee) 400 x (£418,000/4,400) = £38,000
Closing stock (Pee) 800 x (£1,066,000/8,200) = £104,000
Own figures can only be awarded for own figure cost of product.

Over/under absorption
Actual fixed overheads for second quarter (650,000/4) = £162,500
Overhead absorbed:

Tee	4,400 x £2.5 x 4	=	44,000	
Pee	8,200 x £2.5 x 6	=	123,000	£167,000
Over absorption				£4,500

(9 marks)

(ii) **Profit Statement (Marginal costing)**

		Tee (£000's)		Pee (£000's)	
Sales		600		1,600	
Opening stock	85		69		(1)
Variable cost of production	374		943		(1)
Less closing stock	34		92		(1)
Variable production cost of sales		425		920	
Contribution (1)of		175		680	(1)

Total contribution	£855,000	
Fixed costs	£162,500	
Marginal Profit	**£692,500**	(1)of

Own figure can only be awarded if contribution is included in the statement.

Workings:

Opening stock (Tee)	1,000 x (£374,000/4,400)	= £85,000
Opening stock (Pee)	600 x (£943,000/8,200)	= £69,000
Closing stock (Tee)	400 x (£374,000/4,400)	= £34,000
Closing stock (Pee)	800 x (£943,000/8,200)	= £92,000

Own figures can only be awarded for own figure cost of product.

(6 marks)

(b) Profit differences are due to the different valuations for stock. Using the absorption method a proportion of the fixed overheads are carried forward to the next period in the value of stock, which is not the case using the marginal costing method. (2)

Reconciliation

Absorption costing

	Opening stock	Closing stock	Difference	
Tee	£95,000	£38,000	£57,000	
Pee	£78,000	£104,000	(£26,000)	
			£31,000	(½)of

Marginal costing

	Opening stock	Closing stock	Difference	
Tee	£85,000	£34,000	£51,000	
Pee	£69,000	£92,000	(£23,000)	
			£28,000	(½)of

Difference in stock valuation (£31,000 – £28,000) = £3,000 (1)of

Difference in recorded profits

Absorption costing	£689,500		
Marginal costing	£692,500		
Difference		£3,000	(1)of

(5 marks)

(Total 20 marks)

QUESTION 3
Syllabus Topic 3: Cost volume profit analysis (3.2, 3.3, 3.4 and 3.5)

(a)

(i) Current method:

Planned total contribution	= Fixed costs + Profit	
	= £30,000 + £18,000 = £48,000	
Unit contribution	= £48,000 / 8,000 = £6 per unit	(1)
Break-even	= Fixed costs/unit contribution	
	= £30,000 / £6.00 = **5,000 units**	(1)of
Margin of safety	= [(8,000 – 5,000) / 8,000] x 100%	
	= **37.5%**	(1)of

(ii) Changed method:

Unit contribution	= £20 - £12 = £8 per unit	
Break-even	= (£30,000 + £18,000) / £8 = **6,000 units**	(1)of
Margin of safety	= [(8,000 - 6,000) /8,000] x 100%	
	= **25%**	(1)of

(5 marks)

(b) Supporting calculations for management advice

Current method		
Planned profit at 8,000 output	£18,000	
Changed method		
Total contribution at 8,000 output = 8,000 x £8 =	£64,000	(1)of
Profit at 8,000 output = (£64,000 - £48,000) =	£16,000	(1)of

Advice:
Change in production process is less profitable with reduction profit of £2,000 (1)of

(3 marks)

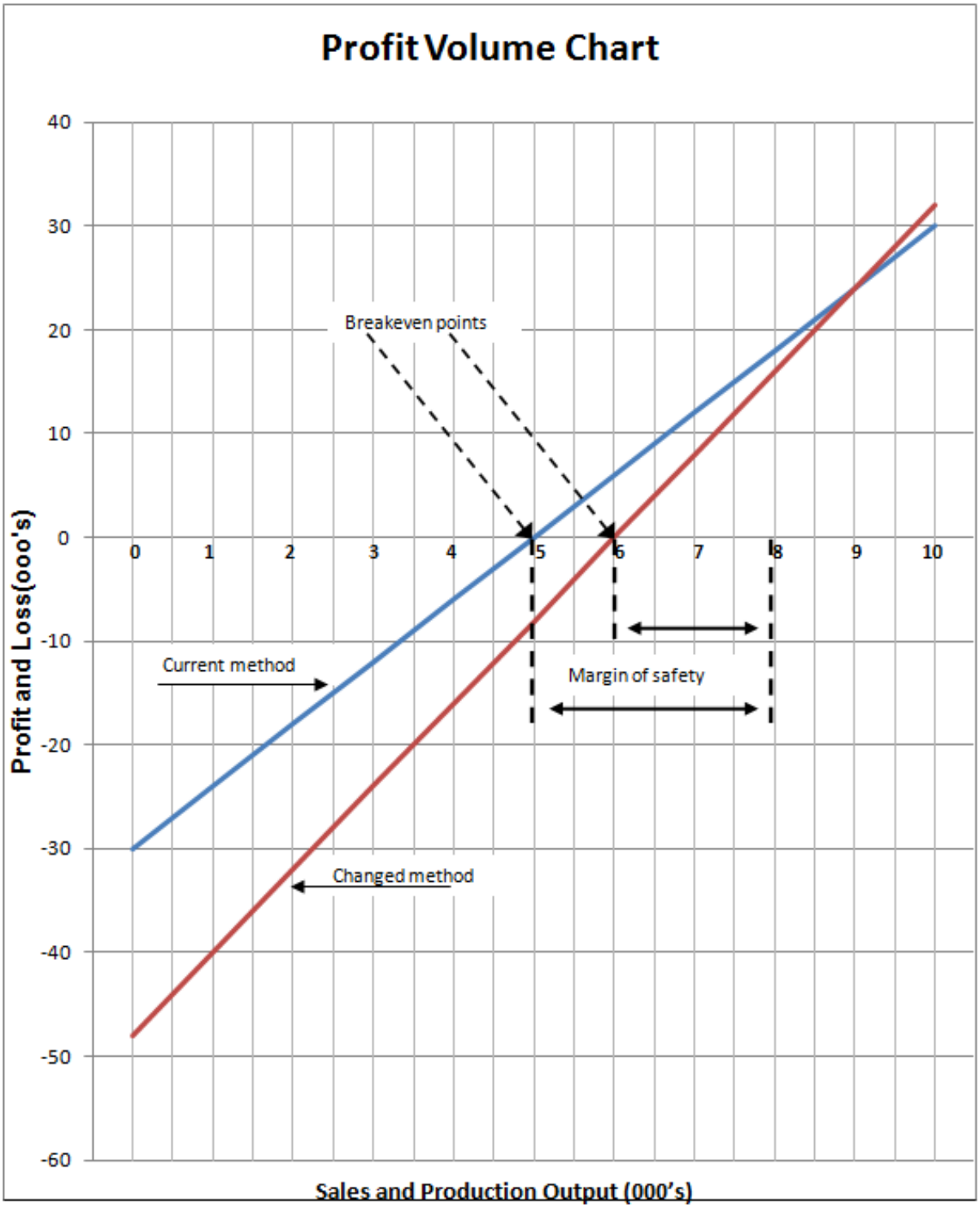
(c) Profit current method = (£6 x output) - £30,000
Profit changed method = (£8 x output) - £48,000
Therefore
(£6 x output) - £30,000 = (£8 x output) - £48,000 (2)of
Output for equal profits = (£48,000 - £30,000) / (£8 - £6) = **9,000 units** (2)of

(4 marks)

(d) Profit volume chart

Heading	(1)	Changed line	(2)of
Labels	(1)	Break-evens	(1)of
Current line	(2)of	Margins of safety	(1)of

(8 marks)



(Total 20 marks)

QUESTION 4
Syllabus Topic 5: Standard costing and variances (5.4 and 5.6)

(a) Standard direct material cost per bottle

			£	
Material A	2,000 litres	@ £5.68	11,360	
Material B	100 kg	@ £2.40	240	
Material C	100 kg	@ £4.00	400	
Total batch cost			12,000	(2)

Standard number of bottles per batch 5,000
Standard direct material cost per bottle (12,000/5,000) = **£2.40** (1)of

(3 marks)

(b)

(i) Material price variance

Material	Standard cost (£)		Actual cost (£)	Variance (£)	
A	(32,800 x £5.68)	=186,304	192,540	**6,236 A**	(1½)
B	(1,620 x £2.40)	= 3,888	3,788	**100 F**	(1½)
C	(1,560 x £4.00)	= 6,240	7,480	**1,240 A**	(1½)
Total		196,432	203,808	**7,376 A**	(1½)

(ii) Material mix variance
Alternative answer involving individual material mixes is acceptable.

Standard cost of 16 batches (16 x £12,000)	=	£192,000	(1)
Standard cost of actual mix [from b(i)]	=	£196,432	(1)of
Material mix variance		**£4,432 A**	(2)of

(iii) Material yield variance
Alternative answer involving individual material mixes is acceptable.

Standard output for 16 batches (16 x 5,000)	=	80,000 bottles	
Actual output	=	78,400 bottles	
Output loss		1,600 bottles	(2)
Yield variance (1,600 x £2.40)		**£3,840 A**	(2)of

(14 marks)

(c) Material usage variance

Standard cost of actual output	(78,400 x £2.40)	=	£188,160
Standard cost of actual materials used		=	£196,432
Usage variance			**£8,272 A** (1½)of

Reconciliation

Material usage variance		£8,272 A
Material mix variance	£4,432 A (½)of	
Material yield variance	£3,840 A (½)of	
		£8,272 A (½)of

(3 marks)

(Total 20 marks)

QUESTION 5
Syllabus Topic 4: Budgetary planning and control (4.4)

(a) **Cash Budget for year ending Dec year 14**

Cash flow figures can only be awarded if shown.
The loan and capital in receipts can be included in the opening bank figure.

Receipts	Jan/March £'s		April/June £'s	July/Sept £'s	Oct/Dec £'s	
Sales	13,200		46,200	63,360	76,560	(2)
Loan	40,000	(1)				
Capital	10,000	(½)		15,000 (½)		
	63,200		46,200	78,360	76,560	(1)of
Less Payments						
Factory machinery	15,000					
Materials	6,000		11,000	13,600	16,000	(2)
Labour	16,000		20,000	24,000	28,000	
Selling expenses	3,600		7,200	8,600	9,600	(1)
Factory overheads	4,320		10,800	10,800	10,800	(1)
Office overheads	2,000		3,000	3,000	3,000	(½)
Loan interest	800		1,200	1,200	1,200	(1)
	47,720		53,200	61,200	68,600	(1)of
Net cash flow (½)	15,480		(7,000)	17,160	7,960	(1)of
Opening bank	0		15,480	8,480	25,640	
Closing bank	15,480		8,480	25,640	33,600	(1)of

(14 marks)

(b) **Budgeted profit statement for the year ending Dec year 14**

Marks for individual costs can only be awarded if the costs are located in the correct position, e.g. depreciation in expenses as opposed to cost of sales

	£'s		£'s	
Sales			260,000	(½)
Material	52,200	(½)		
Labour	88,000	(½)		
Factory overheads	43,200	(½)		
Depreciation	1,500	(½)		
Cost of sales			184,900	
Gross profit			75,100	(½)of
Selling expenses	33,000	(½)		
Office overheads	12,000	(½)		
Bad debts	2,600	(½)		
Loan interest	4,800	(1)		
			52,400	
Net profit			**22,700**	(½)of

(6 marks)

QUESTION 5 CONTINUED

Workings:

	Jan/March	April/June	July/Sept	Oct/Dec
Sales receipts	**£'s**	**£'s**	**£'s**	**£'s**
Sales	40,000	60,000	72,000	88,000
Less bad debts	400	600	720	880
	39,600	59,400	71,280	87,120
Net sales per month	13,200	19,800	23,760	29,040
Cash flow (this three months)	13,200	19,800	23,760	29,040
Cash flow (previous three months		26,400	39,600	47,520
Sale receipts	**13,200**	**46,200**	**63,360**	**76,560**
Material payments:				
Materials	9,000	12,000	14,400	16,800
Materials per month	3,000	4,000	4,800	5,600
Cash flow (this three months)	6,000	8,000	9,600	11,200
Cash flow (previous three months)		3,000	4,000	4,800
Material purchases	**6,000**	**11,000**	**13,600**	**16,000**
Selling expense payments				
Selling expense	6,000	8,000	9,000	10,000
Cash flow (this three months)	3,600	4,800	5,400	6,000
Cash flow (previous three months)		2,400	3,200	3,600
Expense payment	3,600	7,200	8,600	9,600
Loan interest per month*	400	400	400	400
Interest payment	**800**	**1,200**	**1,200**	**1,200**

* interest per month = 12% x £40,000/12 = £400

(Total 20 marks)

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