

Management Accounting Level 3

Model Answers Series 4 2013 (ASE3024)

Level 3 Management Accounting

Series 4 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.

- (1) 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)

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 4 EXAMINATION 2013
MANAGEMENT ACCOUNTING
LEVEL 3
MARKING SCHEME**

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

TOTAL 100 MARKS

Question 1

**Syllabus Topic 2: CVP analysis 2.1, 2.2, 2.3, 2.4 and 2.7
Short term cost behaviour 1.2, 1.3 and 1.4**

- (a) (i) **Break-even point** = $\text{£}174,375 / \text{£}12.50 = 13,950 \text{ units}$ **1**
- Contribution = $40.00 - 27.50 (12.00 + 18.00 + 7.50) = \text{£}12.50$
- (ii) **Margin of safety** = $50,000 \text{ less } 13,950 = 36,050 \text{ units}$
- $36,050 / 50,000 \times 100 = 72.10\% \text{ of budgeted sales}$ **1 of**
(2 marks)
- (b) (i) **Revised break-even point:**
- $= 249,375 / 17.50 = 14,250 \text{ units}$ **2**
- Workings:**
- Revised fixed costs $174,375 + 75,000 = \text{£}249,375$
- Revised variable costs $27.50 - 5.00 = \text{£}22.50 \text{ per unit}$
- Revised contribution = $40 - 22.50 = \text{£}17.50 (12.50 + 5.00) \text{ per unit}$ **or 1 of**
- (ii) **Revised margin of safety:** $50,000 \text{ less } 14,250 = 35,750$
- $35,750 / 50,000 \times 100 = 71.50\% \text{ of budgeted sales}$ **1 of**
(3 marks)
- (c) **Contribution/sales (C/S) ratio by product:**
- | | | | |
|--------------|--|----------|--|
| Product Exe | $(\text{£}16.80 \div \text{£}80.00) \times 100\% = 21\%$ | 1 | |
| Product Whye | $(\text{£}21.00 \div \text{£}60.00) \times 100\% = 35\%$ | 1 | |
| Product Zed | $(\text{£}20.00 \div \text{£}50.00) \times 100\% = 40\%$ | 1 | |
- (3 marks)
- (d) (i) **Overall contribution/sales ratio:**
- | | | | |
|----------------------|---------------------------|------------------|-------------------------------------|
| Contribution: | | £ | |
| Product Exe | (10,000 units × £16.80) = | 168,000 | |
| Product Whye | (6,000 units × £21.00) = | 126,000 | |
| Product Zed | (4,000 units × £20.00) = | <u>80,000</u> | |
| | | <u>374,000</u> | $\frac{1}{2}$ |
| Sales: | | | Contribution |
| Product Exe | (10,000 units × £80.00) = | 800,000 | x 0.21 168,000 |
| Product Whye | (6,000 units × £60.00) = | 360,000 | x 0.35 126,000 |
| Product Zed | (4,000 units × £50.00) = | <u>200,000</u> | x 0.40 <u>80,000</u> |
| | | <u>1,360,000</u> | $\frac{1}{2} \times$ <u>374,000</u> |
- Overall contribution/sales ratio =**
- $(\text{£}374,000 \div \text{£}1,360,000) \times 100\% = 27.5\% \text{ (or } 0.275)$ **1 of**
(2 marks)

Question 2

Syllabus Topic: Short-term decision making 3.6, 3.7 and 3.9

(a) Labour hours required:

Component One	2,000 x 3 =	6,000
Component Two	5,000 x 4 =	20,000
Component Three	6,000 x 3 =	18,000
Component Four	3,000 x 4 =	<u>12,000</u>
Total hours required		56,000
Hours available		44,000

Shortfall in capacity is **12,000 hours**

(2 marks)

(b) Components	One	Two	Three	Four	
Variable costs (£ per unit)					
Direct materials	40	50	20	40	
Direct labour	48	56	36	48	
Variable overheads	<u>12</u>	<u>16</u>	<u>12</u>	<u>16</u>	
Variable cost of manufacturing	100	122	68	104	
Variable cost of buying	<u>121</u>	<u>166</u>	<u>98</u>	<u>136</u>	
Variable cost savings from manufacture	21	44	30	32	2
Labour hours per unit	<u>3</u>	<u>4</u>	<u>3</u>	<u>4</u>	
Variable cost savings from manufacture per direct labour hour	7	11	10	8	2
Production priority	4	1	2	3	

Production schedule:

Component Two	5,000 units x 4 labour hours	=	20,000 hours	1of
Component Three	6,000 units x 3 labour hours	=	18,000 hours	1of
Component Four	1,500 units x 4 labour hours	=	<u>6,000 hours</u>	1of
Capacity of production equals			44,000 hours	1of

Therefore to make up the shortfall they need to buy in:

1,500 units of Component Four and **2,000 units** of Component One.

2of

(10 marks)

(c) Any **three** of the following:

Important further considerations (1 mark for each suggestion required and 1 mark for each reason.)

Could the supplier meet the **delivery times** required?

Could the supplier **guarantee** the **quality** of the products?

Would the **prices** quoted remain **stable**?

Are there likely to be **working capital implications** from using an outside supplier?

Is the external supplier **financially viable**?

Would you be able to negotiate a **just in time system**, thus cutting storage costs?

(3 x 2 marks)

- (d) Arrange overtime for the existing workforce **1**
 Begin recruiting and training additional workers **1**

Accept:

Become more capital intensive by introducing more machines (and therefore needing less workers) **1**

(max 2 marks)

(Total 20 marks)

Question 3

Syllabus Topic 7: Long-term decision making 7.7, 7.8, 7.11, and 7.13

(a) (i) **Net present value (discounted at 10%)**

Project Aye

Year	Cash flow £000	Factor	Present value £000
0	(500)	1.000	(500.00)
1	160	0.909	145.44 ½
2	160	0.826	132.16 ½
3	160	0.751	120.16 ½
4	200 (140+60)	0.683	<u>136.60</u> 1
NPV =			<u>34.36</u> = £34,360

Project Bee

Year	Cash flow £000	Factor	Present value £000
0	(330)	1.000	(330.00)
1	140	0.909	127.26 ½
2	140	0.826	115.64 ½
3	180 (140+40)	0.751	<u>135.18</u> 1½
NPV =			<u>48.08</u> = £48,080

(5 marks)

(ii) **Internal rate of return (IRR)**

Project Aye (discounted at 20%)

Year	Cash flow £000	Factor	Present value £000
0	(500)	1.000	(500.00)
1	160	0.833	133.28
2	160	0.694	111.04
3	160	0.579	92.64
4	200(140+60)	0.482	<u>96.40</u>
NPV =			<u>(66.64)</u> 1

Project Bee (discounted at 20%)

Year	Cash flow £000	Factor	Present value £000
0	(330)	1.000	(330.00)
1	140	0.833	116.62
2	140	0.694	97.16
3	180 (140+40)	0.579	<u>104.22</u>
NPV =			<u>(12.00)</u> 1

IRR for Project Aye = 10% + {10% × [34.36 ÷ (34.36 + 66.64)]} = **13.4%** 1 ½

IRR for Project Bee = 10% + {10% × [48.08 ÷ (48.08 + 12.00)]} = **18.0%** 1 ½

(5 marks)

(b) (i) The profitability index indicates the potential payoff of an investment compared to the initial investment cost. 1

(ii) **Profitability index** = $\frac{NPV}{\text{Capital cost}}$ or $\frac{PV \text{ of cash inflows}}{PV \text{ of cash outflows}}$

Project Aye = $\frac{34,360}{500,000} = 0.069$ Project Aye = $\frac{534,360}{500,000} = 1.069$ 1

Project Bee = $\frac{48,060}{330,000} = 0.146$ Project Bee = $\frac{378,060}{330,000} = 1.146$ 1

(iii) In this instance it demonstrates that **Project Bee** gives the greater return 1

(4 marks)

Question 3 continued

(c) Risk may be incorporated into the capital investment project appraisal process as follows:

Sensitivity analysis (½) – the effect on project viability (1) of a change in assumption regarding each of the key variables can be assessed (1); **2 max**

Range of estimates (½) – a range of values ('high', 'low' as well as 'best estimate') (1) can be estimated for each key variable and the return assessed at each level (1); **2 max**

Probability (½) – probabilities can be attached to each range of values (1), enabling the 'expected value' of a project (1) to be established; **2 max**

Adjustments to required return (½) – the cost of capital can be varied (1) according to the perceived risk (1) of a project. **2 max**

(up to a maximum of 6 marks. ½ mark for each use of heading)

(Total 20 marks)

Question 4

Syllabus Topic 5: Cash and working capital management 5.8

Syllabus Topic 8: Performance evaluation and transfer pricing 8.3 and 8.5

(a)	Brady	Simpson	
(i)	$\frac{\text{Gross Profit}}{\text{Sales}} \times 100\%$	$\frac{125}{325} \times 100\% = 38.46\% (1)$	$\frac{170}{380} \times 100\% = 44.74\% (1)$
			(2 marks)
(ii)	$\frac{\text{Net profit}}{\text{Sales}} \times 100\%$	$\frac{60}{325} \times 100\% = 18.46\% (1)$	$\frac{96}{380} \times 100\% = 25.26\% (1)$
			(2 marks)
(iii)	$\frac{\text{Net profit}}{\text{*Capital employed}} \times 100\%$	$\frac{60}{220} \times 100\% = 27.27\% (1)$	$\frac{96}{325} \times 100\% = 29.54\% (1)$
			(2 marks)
	*Capital employed = fixed assets + current assets – current liabilities		
(iv)	$\frac{\text{Sales}}{\text{Capital employed}}$	$\frac{325}{220} = 1.48 \text{ times } (1)$	$\frac{380}{325} = 1.17 \text{ times } (1)$
			(2 marks)
(v)	$\frac{\text{Current assets}}{\text{Current liabilities}}$	$\frac{140}{55} = 2.55 : 1 (1)$	$\frac{210}{85} = 2.47 : 1 (1)$
			(2 marks)
(vi)	$\frac{\text{Current assets} - \text{stock}}{\text{Current liabilities}}$	$\frac{140 - 70}{55} = 1.27 : 1 (1)$	$\frac{210 - 135}{85} = 0.88 : 1 (1)$
			(2 marks)

- (b) In terms of the gross profit and net profit ratios, **Simpson would seem to be out-performing** Brady.

When we look at the ROCE both companies have a similar result, although it should be noted that Simpson would seem to be a larger company than Brady and should therefore be able to exploit economies of scale.

However, when we compare the net asset turnover, this shows that **Simpson is not performing** as well as Brady in terms of **the level of sales generated by the use of assets**.

Both companies appear to have healthy current ratios, although we can see that both companies are carrying an **unhealthy level of stock**.

Simpson's stock (135) to COGS (210) is particularly poor when compared to Brady.

When we look at the acid test ratio and the company accounts this shows that **neither company** has sufficient **cash reserves** to meet the **current commitment to creditors**.

Simpson has serious liquidity problems in that it has no liquid assets to repay the bank overdraft or the current level of creditors.

Question 4 continued

(0 - 2 marks) Candidate makes no reference to the final accounts, merely stating that one company is better or worse than the other company without supporting evidence

(3 - 5 marks) The candidate begins to make some reference to the final accounts for some aspects of liquidity and profitability

(5 - 8 marks) The candidate makes a comprehensive assessment of all aspects of the liquidity and profitability of the companies making full reference to the financial information provided

(8 marks)

(Total 20 marks)

Question 5

Syllabus Topic 6: Standard costing and variances 6.2, 6.3, 6.6, 6.7, 6.8 and 6.112

(a) **Sales variances:**

(i)	Sales price variance			
		Budgeted (10,600 x £79)	837,400	
		Actual (10,600 x £78)	<u>826,800</u>	
		(or 10,600 x £1)	10,600 Adv	1½

(ii)	Sales volume profit variance			
	(Actual Sales 10,600 - Budgeted Sales 10,000) x £10.85 =	6,510 Fav		1½

Direct material variances:

(iii)	Price variance	Actual price x actual usage (55,000 x £3.90)	214,500	
		Standard price x actual usage £4 x 55,000kg	<u>220,000</u>	5,500 Fav 1½

(iv)	Usage variance	Standard price x actual usage (see above)	220,000	
		Standard price x standard usage £4 x 5kg x 10,600	<u>212,000</u>	8,000 Adv 1½

Direct labour variances:

(v)	Rate variance	Actual rate x actual hours (46,600 x £6.20)	288,920	
		Standard rate x actual hours £6 x 46,600	<u>279,600</u>	9,320 Adv 1½

(vi)	Eff variance	Standard rate x actual hours (see above)	279,600	
		Standard rate x standard hours £6 x 4.5hrs x 10,600	<u>286,200</u>	6,600 Fav 1½

Fixed overhead variances:

(vii)	Exp variance	Actual overhead – given	215,800	
		Budgeted overhead 10,000 units x £21.15	<u>211,500</u>	4,300 Adv 1½

(viii)	Volume variance	Budgeted overheads (see above)	211,500	
		Standard cost of output £21.15 x 10,600	<u>224,190</u>	12,690 Fav 1½

(12 marks)

Question 5 continued

(b) Reconciliation Statement

Budgeted (Gross) Profit	10,000 units at £10.85 per unit	108,500	1
Variances			
Sales price variance	10,600 Adv		
Sales volume profit variance	6,510 Fav	4,090 Adverse (½)	
Direct materials – price	5,500 Fav		
Direct materials – usage	8,000 Adv	2,500 Adverse (½)	
Direct labour - rate	9,320 Adv		
Direct labour - efficiency	6,600 Fav	2,720 Adverse (½)	
Fixed overheads – expenditure	4,300 Adv		
Fixed overheads – volume	12,690 Fav	8,390 Favourable (½)	
Overall Variance		<u>920 Adverse</u>	2
Actual Gross Profit		107,580	(W1) 1
W1 Workings:			
Sales	10,600 units at £78 per unit	826,800	
Costs:			
Materials	214,500		
Labour	288,920		
Fixed overheads	<u>215,800</u>		
Total costs		<u>(719,220)</u>	
Actual profit		<u>107,580</u>	

Note: Reconciliation statement must start with budgeted gross profit

(4 marks)

(c) Investigation of variances is important.

- to take advantage of favourable situations or correct adverse ones **1**
- to ascertain whether a variance is caused by seasonal/economic factors **1**
- to help to pinpoint the cause of, and responsibility for, the variance **1**
- to enable standards to be revised where necessary. **1**

(4 marks)

(Total 20 marks)

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