

Mark Scheme (Results)

Series 2 2014

Pearson LCCI Level 3
Management Accounting (ASE3024)

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**LCCI IQ SERIES 2 EXAMINATION 2014
MANAGEMENT ACCOUNTING
LEVEL 3
MARKING SCHEME**

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

TOTAL 100 MARKS

QUESTION 1

Syllabus Topic: Short-term cost behaviour 1.2 (2); 1.4 (6)

Syllabus Topic 2: CVP analysis 2.2 (6) & 2.4 (6)

(a)	(i)	Total cost of direct materials	= £386,100 x 0.65 =	£250,965.00	1
		Total cost of direct labour	= £286,650 x 0.65 =	£186,332.50	1
				£437,297.50	
					(2 marks)
	(ii)	Total cost per unit			
		Direct materials £12.87 + Direct labour £9.55 + Variable overheads £6.82			
		(£386,100 + £286,650 + £204,750 = £877,500 / 30,000 units)	=	£29.25	1
		Fixed costs [£315,900 ÷ (30,000 × 0.65)19,500 units]	=	£16.20	1
				£45.45	
					(2 marks)
	(iii)	Total profit for the period			
		Sales (30,000 x 65%) = 19,500 units x £46.80	=	£912,600	1
		Less total cost 19,500 units x £45.45	=	(£886,275)	1
				£26,325	
					(2 marks)
(b)	(i)	Net profit			
		Sales (3,000 x £120)		£360,000	½
		Less: Variable costs (£50.40 + £12.60 + £21.00 x 3,000)		(£252,000)	1
		Contribution		£108,000	
		Less: Fixed costs		(£81,000)	
		Net profit		£27,000	½
					(2 marks)
	(ii)	Break-even point (units)			
		Contribution/unit =	£108,000 / 3,000 =	£36.00 per unit	1
		= Fixed cost / Contribution/unit =	£81,000 / £36 =	2,250 units	1
					(2 marks)
(c)	(i)	Expected net profit			
		Revised variable cost per unit			
		Direct material £50.40 x 1.075 =		£54.18	½
		Direct labour £12.60 x 1.05 =		£13.23	½
		Variable overheads £21.00 - £0.66 =		£20.34	½
				£87.75	
		Revised contribution per unit = £120.00 – £87.75 =		£32.25	½
		Total contribution (3,200 x £32.25)		£103,200	½
		Less: Fixed costs (£81,000 + £6,720)		(£87,720)	½
		Expected net profit		£15,480	
					(3 marks)

QUESTION 1 Continued

(ii) **Expected break-even point (units)**

$$= \text{£}87,720 / \text{£}32.25 = \text{2,720 units} \quad \mathbf{2}$$

(2 marks)

(d) **Sales units required to earn net profit of £37,095 if selling is £127.50 per unit**

Net profit	£37,095	
Revised fixed cost	<u>£87,720</u>	
Required contribution	£124,815	1

$$\text{Revised contribution per unit} = \text{£}127.50 - \text{£}87.75 = \text{£}39.75 \quad \mathbf{1}$$

$$= \frac{\text{Required contribution}}{\text{Revised unit contribution}} = \frac{\text{£}124,815}{\text{£}39.75} = \mathbf{3,140 units} \quad \mathbf{1 \text{ OF}}$$

(3 marks)

(e) The term **relevant range of activity** refers to the range of output levels within which a business plans to operate in the short-term period (1). In cost-volume-profit analysis, the unit variable cost of a product and the total fixed cost for a given period are assumed to remain constant within the relevant range of activity (1). If changes occur in cost behaviour patterns, for example a stepped increase in fixed costs, then the CVP analysis is likely to be unreliable (1).

(Max 2 marks)

(TOTAL 20 marks)

Question 2

Syllabus Topic 5: Cash and working capital management 5.4 (2), 5.6 (4), 5.8 (5) and 5.10 (4)

Syllabus topic 4: Budgetary planning and control 4.5 (5)

(a) **Working capital cycle**

$$\text{Stockholding period} = (\text{£}1,260 / \text{£}3,420^*) \times 365 = \mathbf{134 \text{ or } 135 \text{ days}} \quad \mathbf{1}$$

$$\text{Add: Debtors collection period} = (\text{£}1,380 / \text{£}5,700) \times 365 = \mathbf{88 \text{ days}} \quad \mathbf{1}$$

$$\text{Less: Creditors payment period} = (\text{£}1,170 / \text{£}3,420) \times 365 = \mathbf{(125) \text{ days}} \quad \mathbf{1}$$

$$\text{Working capital cycle} \quad \mathbf{97 \text{ days}}$$

$$\text{Workings: COGS} = 5,700 \times 60\% = \mathbf{£3,420} \quad \mathbf{1}$$

(4 marks)

(b) (i) **Expected change in working capital cycle**

$$\text{Stockholding period} = [(\text{£}1,260 \times 1.2) 1,512 / (\text{£}3,420 \times 1.15) 3,933] \times 365 = \mathbf{140 \text{ days}} \quad \mathbf{2}$$

$$\text{Add: Debtors collection period} = 88 + 24 = \mathbf{112 \text{ days}} \quad \mathbf{1}$$

$$\text{Less: Creditors payment period} = 125 + 12 = \mathbf{(137) \text{ days}} \quad \mathbf{1}$$

$$\text{Working capital cycle} \quad \mathbf{115 \text{ days}}$$

(4 marks)

QUESTION 2 Continued

(ii) **Expected net working capital investment in stock, debtors and creditors**

Increase in stock = $[(£1,260 \times 1.2) 1,512 - £1,260]$	=	£000	
		252	1
<u>Add:</u> Increase in debtors = $[(£5,700 \times 1.15) 6,555 \times (112 \div 365)] = £2,011 - £1,380$	=	631	2
<u>Less:</u> Increase in creditors = $[(£3,420 \times 1.15) 3,933 \times (137 \div 365)] = £1,476 - £1,170$		<u>(306)</u>	2
Net investment in working capital		<u>£577</u>	

(5 marks)

- (c) Working capital management involves the management of stock, debtors, creditors and cash/bank (1) with the aim of minimising the risk of insolvency/illiquidity (1). 1

Efficient working capital management will ensure that a company has sufficient cash to meet its day-to-day operational needs (1). 1
(Maximum 2 marks)

(d) **Revised budgeted profit statement**

	£	£	
Sales (£900,000 × 0.95 × 0.92)		786,600	1
Cost of sales:			
Direct materials (£360,000 × 0.85 × 0.92)	281,520		1
Direct labour (£240,000 × 0.90 × 0.92)	198,720		1
Variable overhead (£100,000 × 0.92)	92,000		1
Fixed overhead	<u>180,000</u>	<u>(752,240)</u>	
Revised budgeted net profit		<u>34,360</u>	

(5 marks)

(Total 20 marks)

Question 3

Syllabus Topic 7: Long-term decisions 7.3(6), 7.7(6), 7.11 (3) & 7.13 (5)

(a) (i) **Calculation of accounting rate of return (ARR)**

Machine Exe: Annual depreciation = $(900 - 100) \div 5 \text{ years} = \text{£160,000}$ ½

Average accounting profit = $\frac{[(200 + 240 + 240 + 280 + 440) 1,400 - (5 \times 160)]}{5 \text{ years}} = \text{£120,000}$ 1

Average investment value = $(900 + 100) \div 2 = \text{£500,000}$ ½

ARR = £120,000 / £500,000 × 100% = 24% 1 OF

Machine Whye: Annual depreciation = $(750 - 50) \div 5 \text{ years} = \text{£140,000}$ ½

Average accounting profit = $\frac{[(210 + 220 + 230 + 240 + 250) 1,150 - (5 \times 140)]}{5 \text{ years}} = \text{£90,000}$ 1

Average investment value = $(750 + 50) \div 2 = \text{£400,000}$ ½

ARR = £90,000 / £400,000 × 100% = 22.5% 1 OF

(6 marks)

QUESTION 4

Syllabus Topic 3: Short-term decision making 3.2 (14) & 3.3 (6)

- (a) Total production cost per unit = £20 plus fixed production costs per unit (£50,000 / 6,250) £8 = **£28 per unit** 1

(i) **Absorption costing statement for Month 5**

	£000	£000	
Sales	5,500 x £40	220.0	½
Production costs			
Opening stock	1,000 x £28	28.0	½ OF
Add: Production	<u>6,000 x £28</u>	<u>168.0</u>	½ OF
	7,000	196.0	
Less: Closing stock	<u>1,500 x £28</u>	<u>(42.0)</u>	½ OF
Production cost of sales	<u>5,500</u>	154.0	
Add under absorption of fixed production costs	250 x £8	<u>2.0</u>	1
Gross profit		64.0	½
Less: Selling and administration costs:			
variable	5,500 x £4	22.0	½
fixed		<u>6.5</u>	½
Profit for period		<u>35.5</u>	½ OF

(6 marks)

(ii) **Marginal costing statement for Month 5**

	£000	£000	
Sales	5,500 x £40	220.0	
Production costs			
Opening stock	1,000 x £20	20.0	½ OF
Add: Production	<u>6,000 x £20</u>	<u>120.0</u>	½ OF
	7,000	140.0	
Less: Closing stock	<u>1,500 x £20</u>	<u>(30.0)</u>	½ OF
Variable production cost of sales	(5,500 x £20)	110.0	½ OF
Variable selling and administration costs	5,500 x £4	<u>22.0</u>	½
Contribution 1		88.0	
Less: Fixed costs			
Production	50.0		½
Selling and admin	<u>6.5</u>	<u>(56.5)</u>	
Profit for period		<u>31.5</u>	

(4 marks)

- (b) Reconciliation of absorption costing profits with marginal costing profits

Absorption costing profit	35.5	½	
Less: Fixed production costs absorbed in closing stock (500 x £8)	<u>(4.0)</u>	1	
Marginal costing profit	<u>31.5</u>	½	

(2 marks)

- (c) Using absorption costing some fixed production overheads (1) are carried forward in the value of the closing stock, whereas in the marginal costing method it is treated as a period cost (1).

(2 marks)

- (d) Marginal costing enables the analysis of different market price/volume levels (1) to allow for the selection of optimal contributions (1).

2

It can be used in conjunction with CVP analysis to determine break-even points (1) for profit planning purposes (1).

2

The exclusion of fixed production costs (1) on a marginal basis enables the company to be more competitive (1) by only using those costs that are relevant (1) in decision making in the short term (1).

2 max

QUESTION 4 Continued

Profits cannot be easily manipulated by increasing stocks (1) in times of low sales since stocks exclude fixed costs (1) and profits, therefore, vary directly with sales (1). **2 max**

(Max 6 marks)

(Total 20 marks)

QUESTION 5

Syllabus coverage: short-term cost behaviour 1.3 (2)

Budget planning and control 4.6 (2) and 4.8 (6)

Performance evaluation and transfer pricing 8.3 (6) & 8.4 (4)

(a)	90% capacity	
Production and sales in units	3,780	
Sales revenue £s	945,000	1
Direct materials	151,200	1
Direct labour	113,400	1
Production overheads	132,300	2
Selling, distribution and admin costs	115,860	2
Total costs	512,760	
Profit	432,240	1 OF

(8 marks)

Workings:

Sales price $840,000 / 3,360 = £25$ per unit $\times 3,780 = £945,000$
Materials $134,400 / 3,360 = £40$ per unit $\times 3,780 = £151,200$
Labour $100,800 / 3,360 = £30$ per unit $\times 3,780 = £113,400$

Production overheads:	Costs	Units	
High	140,700	4,200	
Low	123,900	3,360	
Diff	16,800	840	Therefore VC = £20 per unit

$VC = 4,200 \times £20 = £84,000 - £140,700 = \text{Fixed Costs } £56,700$

$3,780 \times £20 = £75,600 + £56,700 = \mathbf{£132,300}$

S & D and Admin: $£106,200 - £28,920 = £77,280 / 3,360 = £23$ variable costs per unit

$3,780 \times £23 = £86,940 + £28,920 = \mathbf{£115,860}$

(b) A fixed budget is based on **one level of activity** (1), whereas a flexible budget has all its variable costs and revenues adjusted for different levels of activity.(1)

(2 marks)

QUESTION 5 Continued

(c) (i) **Return on Capital Employed** measures the relationship between the (operating) profit (1) of a business/division and the capital invested (1). (2 marks)

(ii) **Residual Income** adjusts the operating profit of a division (business) (1) by deducting a charge for the opportunity cost (cost of capital) of the capital invested in the division (business) (1). (2 marks)

(d) (i) Expected return on capital employed (ROCE)

	£	
Budgeted total contribution – 30,000 units x £22.50	675,000	1
<u>Less: Fixed costs</u>	<u>(315,000)</u>	
Budgeted divisional profit	<u>360,000</u>	1 OF

Contribution per unit = £80.00 – £57.50 = £22.50 **1**

ROCE = $\frac{\text{Budgeted profit}}{\text{Budgeted investment}} \times 100\% = \frac{\text{£360,000}}{\text{£2,250,000}} \times 100\% = \text{16\%}$ **1 OF**

(4 marks)

(ii) Expected residual income (RI)

	£	
Budgeted divisional profit	360,000	
<u>Less: Cost of capital charge – 12% x £2,250,000</u>	<u>(270,000)</u>	1
Budgeted residual income (RI)	<u>90,000</u>	1 OF

(2 marks)

(Total 20 marks)

