Mark Scheme (Results)

Series 3 2014

Pearson LCCI Level 3
MANAGEMENT ACCOUNTING
(ASE3024)

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June 2014

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

DISTINCTION MARK 75%
MERIT MARK 60%
PASS MARK 50%
TOTAL 100 MARKS

QUESTION 1
Syllabus Topic 1: Short-term cost behaviour 1.3 (5) & 1.5 (3)
Syllabus topic: CVP analysis 2.2 (6) & 2.5 (6)

(a) (i) Calculation of variable cost per unit and total fixed costs per period at Period 1 general price-level index

	Units	**Total costs**		**Index adjustment**		
High level	16,800	£483,000	x	110/138	£385,000	**1 OF**
Low level	12,400	£375,000	x	110/125	£330,000	**1**
	4,400				**55,000**	

Variable cost per unit = £55,000 / 4,400 = **£12.50 per unit** **1 OF**

Fixed costs per period = £385,000 – (16,800 x £12.50) £210,000 = **£175,000** **2 OF** (5 marks)

(ii) Estimation of total operating costs of 18,120 units at general price-level index = 155

Total operating costs at general price-level index = 110

Variable operating costs 18,120 units x £12.50	£226,500	**½ OF**
Add: Fixed costs	£175,000	**½ OF**
Total operating costs	£401,500	

Adjusted operating costs = **£401,500 x 155/110 = £565,750** **2 OF** (3 marks)

(b) (i) **Contribution per unit, break even in units, and the expected profit:**

Selling price	£37.50	
Less: Variable costs	£22.25 (4.70 + 12.75 + 4.80)	
Contribution	**£15.25**	½

Break even = Fixed overheads 81,440 / 15.25 = **5,340 units** ½

Profit = 14,000 x £15.25 = £213,500 - £81,440 = **£132,060** **1 OF**

(2 marks)

(ii)

Selling price	37.50		
Less: Variable costs	18.00 (4.70 + **8.50*** + 4.80)	(*12.75 x 2/3)	**1**
Contribution	**19.50**		**1 CF**

Break even = Fixed overheads (81,440 x 1.5) = **£122,160** / 19.50 = **6,265 units** **1OF**

Profit = 14,000 x £19.50 = £273,000 - £122,160 = **£150,840** **1OF**

(4 marks)

(c) **See separate profit/volume chart *on next page***

1 mark for correctly labelled axis and heading (½ mark each) **1**

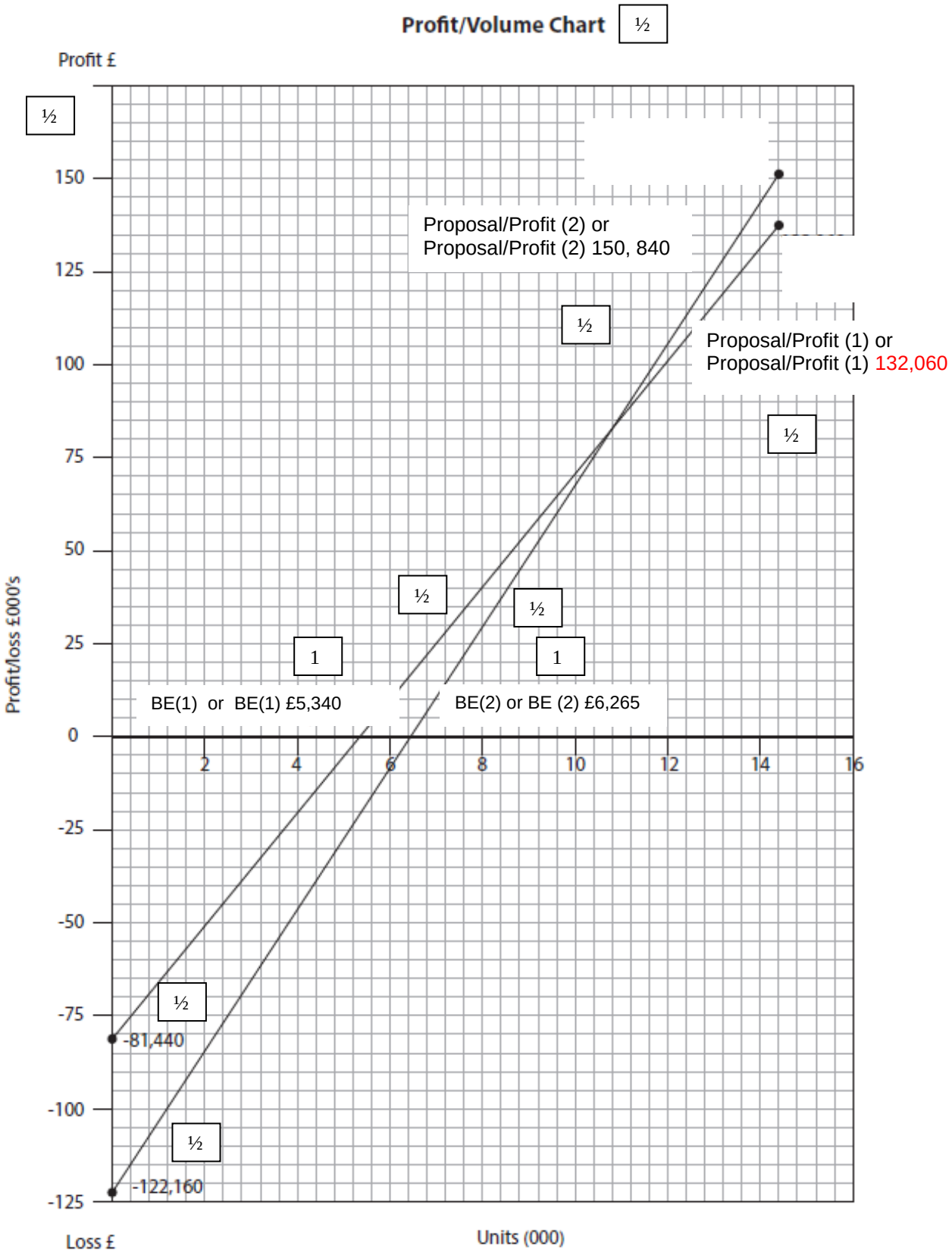
1 mark for each break even – correctly labelled. Note: Candidates must label the break even points in some manner which identifies the existing proposal and the new proposal. **2**

1½ marks for each line – correctly labelled – ½ mark for each line and ½ mark for each of the labelling of the fixed costs and profit

Note: Candidates must label the items in some manner which identifies the top point as the new proposal and the lower point as the existing proposal – e.g. new profit (2) and existing profit (1) and new proposal (2) and existing proposal (1)

3
(6 marks)
(Total 20 marks)

1 (c) profit volume chart



Question 2
Syllabus Topic 5: Standard costing and variances (6.5), (6.6), (6.7) & (6.12)
Syllabus Topic 8: Performance evaluation and transfer pricing (8.3) & (8.5)

(a) (i) **Fixed production overhead expenditure variance**

Budgeted fixed production overheads £18.00 x 2.5 x 10,000	£450,000
Less: Actual fixed production overheads	£483,300
	£33,300 Adv 2

(ii) **Fixed production overhead volume variance**

(Standard rate x Standard hours) £18.00 x 2.5 x 9,700	£436,500
Less (Standard rate x Budgeted hours) £18.00 x 2.5 x 10,000]	£450,000
	£13,500 Adv 2

(iii) **Fixed production overhead capacity variance**

(Standard rate x Budgeted hours)	£450,000
Less (Standard rate x Actual hours) £18 x 26,160	£470,880
	£20,880 Fav 2

(iv) **Fixed production overhead efficiency variance**

(Standard rate x Standard hours)	£436,500
Less (Standard rate x Actual hours)	£470,880
	£34,380 Adv 2

Lose 1/2 a mark for incorrect or missing descriptor

(b) **Reconciliation of fixed production overhead variances**

Capacity	+	Efficiency	=	Volume	+	Expenditure	=	Total
20,880 Fav	+	34,380 Adv	=	13,500 Adv	+	33,300 Adv	=	**46,800 Adv 2 CF**

Standard 436,500 – Actual 483,300 **= 46,800 Adv**

(10 marks)

(c) (i) **ROCE** Budgeted profit 300 x 100% = **22.22%** **1**
Budgeted investment 1,350

Profit = 1,200 – 480 – 420 = **300** **1** (2 marks)

(ii) **Residual income**

	£000	
Profit	300	
Less: Cost of capital (12% x £1,350,000)	162	**1**
Residual income	**138**	**1OF**

(2 marks)

(d) Revised profit £300,000 + **£45,000** = **£345,000** **1OF**

Revised capital employed £1,350,000 + **£300,000** = **£1,650,000** **1 CF**

Revised ROCE £345 x 100% = **20.91%**
£1,650

Working:	**£000**	
Additional sales 12,000 x £18	216	½
Less: Variable costs 12,000 x £8	(96)	½
Fixed costs (depreciation) £300 ÷ 4	(75)	½
Additional profit per annum	**45**	½

Revised residual income	**£000**	
Revised Profit	345	
Less: Cost of capital 12% x £1,650,000	198	**1**
	147	**1OF**

(6 marks)

(Total 20 marks)

QUESTION 3
Syllabus Topic 7: Long-term decision-making 7.2(3), 7.7(4), 7.6(6), 7.8(3) & 7.10(4)

(a) (i) **Calculation of net present value (NPV)**

	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	
	£000	£000	£000	£000	£000	£000	
Machine cost / cash flow	(800)	300	420	610	450	165	
Lost contribution		(125)	(125)	(125)	(125)	(125)	**1**
Working capital	(180)					180	**1**
Residual value						60	½
Net cash flow	**(980)**	**175**	**295**	**485**	**325**	**280**	½

Award any correct marks

Year	**Net cash flow**	**Disc. Factor @ 12%**	**Present values**	
	£000		**£000**	
0	(980)	1.000	(980.00)	½
1	175	0.893	156.28	½
2	295	0.797	235.12	½
3	485	0.712	345.32	½
4	325	0.636	206.70	½
5	280	0.567	158.76	½
		NPV =	**122.18**	CF ONLY

(6 marks)

(ii) **Calculation of internal rate of return (IRR)**

Year	**Net cash flow**	**Disc. Factor @ 18%**	**Present values**
	£000		**£000**
0	(980)	1.000	(980.00)
1	175	0.847	148.23
2	295	0.718	211.81
3	485	0.609	295.37
4	325	0.516	167.70
5	280	0.437	122.36
		NPV =	**(34.53)** **1 OF**

IRR = 12% + {6% × [122.18 ÷ (122.18 + 34.53)]} = **16.68%** **2OF** (3 marks)

(iii) **Calculation of discounted payback period**

Year	**Present value**	**Cumulative cash flows**	
	£000	**£000**	
0	(980.00)	(980.00)	
1	156.27	(823.73)	½
2	235.11	(588.62)	½
3	345.32	(243.30)	½
4	206.70	(36.60)	½ OFs from i
5	158.76		

Discounted payback period
= 4 + (36.60 ÷158.76) = 4.23 **years or 4 years 3 months 1 OF** (3 marks)

(b) **Strengths**
It takes into account the time value of money. **1**
It is expressed as a simple percentage, which is easily understood. **1**
It can be used to establish a target rate of return. **1**

Weaknesses
It is not useful for comparing two mutually exclusive investments. **1**
Projects with unconventional cash flows can have either negative or multiple IRRs. **1**
It ignores absolute monetary value of return on investment. **1** (6 marks)

Question 3 Continued

(c) **Limitations of the accounting rate of return method include the following:**
Cash flows are ignored and only accounting profits are considered. **1**
Time value of money not taken into account. **1**
Use of different accounting policies may distort profit figures. **1**
Uncertainty and risk are not taken into account. **1**
TWO required (2 marks)

(Total 20 marks)

Question 4
Syllabus Topic 5: Cash and working capital management 5.5 (4), & 5.8 (16)

(a) (i) Ratios:

(i) **Finished goods stock turnover**

Production cost of sales / Stock of finished goods = £320,000 ½ / £52,000 ½ = **6.15 times 1 OF**

Cost of sales = 47,000 + 330,000 – 57,000 = **£320,000 1**

Average stock = 47,000 + 57,000 / 2 = **52,000 1** (3 marks)

(ii) **Debtor collection period**

Trade debtors x 365 days / Credit sales = £72,000 x 365 / £780,000 = **34 days 2 CF** (2 marks)

(iii) **Creditor payment period**

Trade creditors x 365 days / Cost of sales = £48,000 ½ x 365 / £320,000 ½ = **55 days 1 OF** (2 marks)

Accept £48,000 / £330,000 = 53 days

(iv) **Current ratio**

Current assets : Current liabilities = £129,000 : £73,000 = **1.77 : 1 1**
(1 mark)

(v) **Acid test (quick) ratio**

Current assets – stocks: Current liabilities = £72,000 : £73,000 = **0.99 : 1 2**
(2 marks)

(b) Comments on the liquidity of the company.

The company's stock turnover is well below the industry average. **The company needs to take action to reduce its stock levels, which is tying up unnecessary working capital. (1)**

The debtor's collection period is a respectable 34 days and **seems to indicate that the company is taking a firm stance with regard to chasing debtors for payment. (1)**

The creditor's payment period is too long – **the company might be at risk of a supplier refusing to deal with them (1) and/or not giving reasonable discounts (1), thus having to seek alternative suppliers (1) who might charge a higher price. (1) 2 MAX**

The current ratio is around the industry average of 1.75 : 1, **but the accounts**

show that too much working capital is tied up in stock and/or debtors. 1*

The acid test is on the industry average of 1 : 1 but the accounts show that the company has a bank overdraft (1) and therefore no immediate finance to repay its creditors (1), who are already being delayed for payment. (1) **(2 MAX)**

(MAX 6 marks)

Question 4 continued

(c) (i) **Customer credit**

Change = 780,000 x (15 / 365) = An **increase (1)** of **£32,055 debtors (1)** **2**

Alternative answer (due to rounding)

780,000 x 49/365 = 104,712 – 72,000 = 32,712 increase (accept answer in the region of)

(2 marks)

(ii) **Supplier credit**

Change = 320,000 x (10 / 365) = A **decrease (1)** of **£8,767 creditors (1)** **2**

Alternative answer (due to rounding)

320,000 x 45/365 = 39,452 – 48,000 = 8,548 reduction (accept answer in the region of)

Note if they have calculated 53 days in part b they will get £38,875 - 48,000 = £9,125

(2 marks)

(Total 20 marks)

Question 5
Syllabus coverage Short-term decision making 3.4 (4) & 3.9 (16)

(a) (i) **Shortfall in capacity**: Machine hours

Component P	1,800 x 2 =	3,600
Component Q	2,000 x 3 =	6,000
Component R	2,200 x 3 =	6,600
Total hours required		16,200
Hours available		8,000

Shortfall is **8,200 machine hours** (2 marks)

(ii)

Order of production: Components	**P**	**Q**	**R**	
Variable costs (£ per unit)				
Direct materials	4	6	8	
Direct labour	16	32	32	
Variable overheads	4	8	8	
Variable cost of manufacture	24	46	48	**1**
Variable cost of buying	48	76	90	
Variable cost savings from manufacture	24	30	42	**1**
Machine hours per unit	2	3	3	
Variable cost savings per machine hour	**12**	**10**	**14**	**1**
Production priority	**2**	**3**	**1**	**1**

(4 marks)

(iii) **Production schedule:**

Component **R**	**2,200 units** x 3 machine hours	=	6,600 hours	**1of**
Component **P**	**700 units** x 2 machine hours	=	1,400 hours	**1 of**
Capacity of production equals			8,000 hours	

Therefore to make up the shortfall they need to buy in:
1,100 units of Component **P** **1of**
2,000 units of Component **Q** **1of** (4 marks)

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

(1 mark for each suggestion and 1 mark for each reason.)

Could the supplier meet the delivery times required? (1) – we might run out of stock (1)
Could the supplier guarantee the quality of the products? (1) – if poor could lose custom (1)
Would the prices quoted remain stable? – develop
Are there likely to be working capital implications from using an outside supplier?
Is the outside supplier financially viable?
Would you be able to negotiate a just in time system, thus cutting storage costs?
(3 x 2 marks)

Question 5 Continued

(c) (i) An **opportunity cost** is the benefit sacrificed from a course of action (1) in favour of an alternative (1) course of action. **2**

Also accept:
Every decision, which involves making a choice (1) between two or more mutually exclusive alternatives (1), has an opportunity cost. **2**

The concept of opportunity cost plays a crucial role in ensuring that scarce resources are used efficiently. **1** (Max 2 marks)

(ii) A **relevant cost** is a future cash flow (1) arising as a direct consequence of the decision (1) under review. **2**

Also accept:
Decisions involve making choices among alternative courses of action. **1**

Because decisions relate to what will happen in the future (1), the consequences of each course of action (1) are the future costs that are expected to arise (1) from the different choices. **3** (Max 2 marks)

(Total 20 marks)

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