Mark Scheme

Series 4 2014
Results

Pearson LCCI Level 3
Certificate in Management Accounting
(ASE3024)

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

QUESTION 1
Syllabus Topic 2: (CVP) Analysis 2.1 (2), 2.2 (6), 2.3 (4), 2.4 (2), 2.5 (6) and 2.6 (2)

(a) (i) **Contribution/sales ratio**

Unit contribution = £148 less £82 - (£72 + £10) = **£66 per unit** **1**

(Contribution) £66 / (Selling price) £148 = **44.6%** **1OF**

(ii) **Break even in sales revenue**

Total fixed costs = 6,400 units x £58 (£42 + £16) = **£371,200** **1**

£371,200 / 0.446% = **£832,287** **1OF**

OR 5,624 units x £148 = **£832,352**

(iii) **Margin of safety**

Break even = 371,200 / £66 = **5,624 units** **1OF**

Margin of safety = 6,400 – 5,624 = 776 / 6,400 = **12.12%** **1OF**

(b) The break-even point in sales units would **decrease 1** because the unit contribution would **increase**. **1**

(8 marks)

(c) (i) **Contribution per unit**

Selling price £80 less £56 = **£24 per unit** **1OF (if no fixed costs included)**

Variable costs =		
Direct labour (2 hours x £6)	12	
Direct materials (2 kg x £8)	16	
Variable production overheads (2 hours x £8)	16	
Selling and administrative overheads	12	
Total variable costs	**56**	**1**

(ii) **Break-even point in units =**

Fixed costs (£12 x 3,500) **£42,000 / £24 = 1,750 units** **2OF**

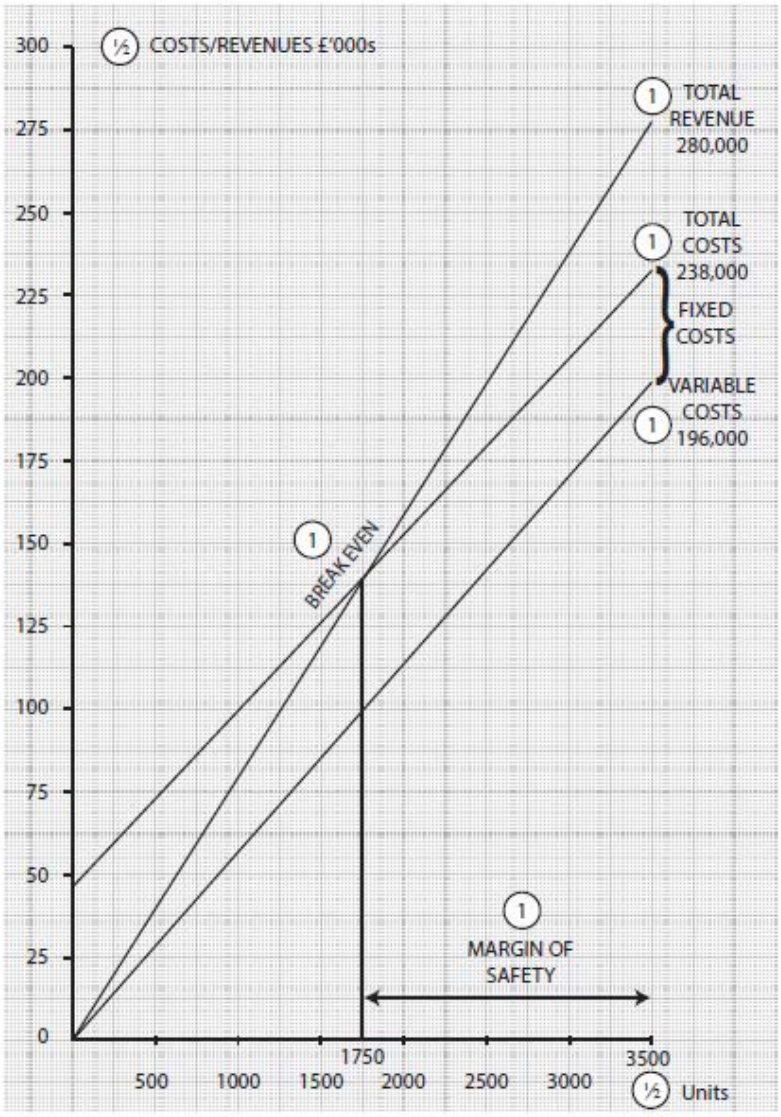
(iii) **Margin of safety =**

3,500 – 1,750 = **1,750 / 3,500 = 50%** **2OF**

(6 marks)

(d) **See separate break even sheet**

CONTRIBUTION BREAK EVEN CHART



(6 marks)

Vertical axis must state 'costs and revenue' for ½ mark.

Break-even point = **1,750 units**

Margin of safety = **3,500 to 1,750 units**

Total revenue = 3,500 units x £80 = **£280,000**

Total variable costs = 3,500 x £56 = **£196,000**

Total costs = £196,000 + Fixed costs £42,000 = **£238,000**

plus 1 mark for axis (6 marks)

(Total 20 marks)

Question 2

Syllabus Topic 7: Long-term Decision Making (7.2), (7.3) and (7.4)

(a) (i) **Payback period**

Machine A
Annual depreciation £800,000 – £100,000 / 5 years = **£140,000** ½

Cost saving £100,000 plus depreciation £140,000 = **£240,000** ½

Payback period = £800,000 / £240,000 = 3.33 years or 3 years 4 months **1**

Machine B
Annual deprecation £900,000 - £100,000 / 5 years = **£160,000** ½

Cost saving £130,000 plus depreciation £160,000 = **£290,000** ½

Payback period = £900,000 / £290,000 = 3.10 years or 3 years 1 month **1**

(4 marks)

(ii) **Net present value**

	Machine A				**Machine B**			
	£000		**£000**		**£000**		**£000**	
Year 0	(800)	1.000	(800.00)	½	(900)	1.000	(900.00)	½
1-4	240	3.169	760.56	**1**	290	3.169	919.00	**1**
5	340	0.621	211.14	**1**	390	0.621	242.20	**1**
NPV			**171.70**	**½ OF**			**261.20**	**½ OF**

(6 marks)

(iii) **Internal rate of return** Discounting at 20%:

	Machine A				**Machine B**			
	£000		**£000**		**£000**		**£000**	
Year 0	(800)	1.000	(800.00)		(900)	1.000	(900.00)	
1-4	240	2.588	621.12		290	2.588	750.52	
5	340	0.404	137.36		390	0.404	157.56	
NPV			**(41.52)**	**1OF**			**8.08**	**1OF**

IRR for Project A = 10% + {10% × [171.70 ÷ (171.70 + 41.52)]} = **18.02%** **2OF**

IRR for Project B = 10% + {10% × [261.20 ÷ (261.20 - 8.08)]} = **20.32%*** **2OF**

*Do not accept 19% if 8.08 is correctly presented.

(6 marks)

(b) Management should purchase **Machine B** as it has a greater positive NPV (1) and a higher IRR (1) on a greater investment sum. It also has a shorter payback period. (1)

(Maximum 2 marks)

(c) **Two required**:

Cash flows are ignored.

Only accounting profits are considered.

Time value of money is not taken into account.

Use of different accounting policies may distort profit figures.

Uncertainty and risk are not taken into account. (2 marks)

(Total 20 marks)

Question 3

Syllabus Topic Short-term Decision Making 3.10 (14), and 3.13 (6)

(a) **Calculation of selling price**

£ per unit		
Direct material cost	73.95	½
Direct labour cost	42.30	½
Production overhead (5 x £15.75)	78.75	**1**
Total production cost	195.00	
Add: Non-production overhead (£195.00 x 0.12)	23.40	**1OF**
Total cost	218.40	
Add: Required return on capital employed [(£372,000 x 0.15) ÷2,400]	23.25	**2**
Required selling price	**241.65**	**1OF**

(6 marks)

(b) (i) **Special order decision**

		£	**£**	
Sales revenue			345,800	½
Variable costs:				
Direct material		119,600		½
Direct labour	(2,240 hours x £33.50)	75,040		**1**
Variable overhead	(2,240 hours x £26.80)	60,032		**1**
			254,672	
Contribution from special order			**91,128**	**1**

Contribution from lost sales

Calculation of existing contribution:	**£ (Per Unit)**	
Selling price	329.00	
Variable costs (121.10 + 60.30 + 48.24)	229.64	**1**
Contribution per unit	99.36	**1**

Contribution per direct labour hour = £99.36 ÷ 1.8 = **£55.20** **1OF**

Direct labour hours per unit = £60.30 / £33.50 = **1.8 labour hours per unit** **1OF**

Thus, contribution from lost sales = 2,240 hours x £55.20 = **£123,648** **1OF**

Award 5 marks for correct answer (£123,648).

Thus, the special order is **not worthwhile** since it will result in a **loss** of **£32,520** (£123,648 - £91,128) **1OF**

(10 marks)

(ii) How important is the new customer **1** – would other orders follow? **1**

Will sales really be lost **1** or could they be delayed? **1**

What will be the impact on existing customers **1** would they go elsewhere? **1**

Could overtime be worked **1** – or could extra workers be employed? **1**

Could the order be sub-contracted **1** without increasing costs? **1**

2 marks for each suggestion x 2 (4 marks)

(Total 20 marks)

Question 4

Syllabus Topic 5: Cash Budgets 5.2 (12), 5.3 (2) and 5.7 (6)

(a) **Cash Budget**

	January	February	March	
Cash inflow	**£**	**£**	**£**	
Cash sales	15,400	16,100	13,300	**1½**
Debtors	132,300	138,600	144,900	**1½**
	147,700	154,700	158,200	
Cash outflow				
Material	60,000	63,000	69,000	**1 ½**
Labour	45,000	46,000	40,000	**1½**
Taxation			80,000	**½**
Machine*	20,000		20,000	**1**
Variable overhead	33,000	34,500	31,500	**1 ½**
Fixed overhead	26,000	26,000	26,000	**1**
	184,000	169,500	266,500	
Net inflow/(outflow)	(36,300)	(14,800)	(108,300)	**1OF**
Opening balance	(18,000)	(54,300)	(69,100)	
Closing balance	(54,300)	(69,100)	(177,400)	**1OF**

*Do award mark if £20,000 in three columns.

(12 marks)

Workings:

Jan cash sales = 2,200 x £70 = £154,000 x 10% = **£15,400**
Jan credit sales = £154,000 x 90% = **£138,600** payable in February

Materials Nov 2,000 x £30 = **£60,000** payable in January

		January	February	March
Labour	previous month 25%	10,500	11,500	11,500
	current month 75%	34,500	34,500	28,500
Variable overhead				
	previous month 50%	15,750	17,250	17,250
	current month 50%	17,250	17,250	14,250

(b) There are **non-cash items** in the Profit and Loss Account, **1 for example** depreciation and provision for doubtful debts. **1**
Capital expenditure is included in a cash budget **1** whereas in the final accounts it is in the balance sheet. **1**
Taxation is included in a cash budget. **1**
There is a **time lag** in the **settlement of debtors and creditors**, **1** not reflected in the Profit and Loss Account. **1**
The purchase of a new machine would be recorded in the cash flow **1** but would not be recorded in the profit and loss account. **1**

(Maximum 6 marks)

(c) Cost of inability to meet bills as they fall due with interest charged or loss of discount receivable. **1**
Cost of borrowing cash to meet unexpected demands. **1**

(2 marks)

(Total 20 marks)

Question 5
Syllabus Topic 8: Performance Evaluation and Transfer Pricing 8.9 (10)

(a) **Net profit for each division**

		Division X			Division Y	
	£	£		£	£	
Sales:						
External (5,400 x £27.00)		145,800	½		312,800	½
Transfers to Division Y (2,600 x £25.80)		67,080	**1**		nil	
		212,880			312,800	
Less: Costs						
Variable 5,400 x £14.40	77,760		½			
2,600 x £13.70	35,620		½			
	113,380					
Fixed (44,928 + 21,632)	66,560	179,940	½			
Transfer from Division Y				67,080		**1 OF**
Other costs				219,620	286,700	½
Net profit		32,940	½ **OF**		26,100	½ **OF**

(6 marks)

(b) **Transfer price required:**

Profit for the period for 15% ROCE = £250,800 x 0.15 = **£37,620** **1**

Incremental profit = £37,620 - £32,940 = **£4,680** **1OF**

Increase in transfer price = £4,680 / 2,600 = **£1.80 per unit 1OF** + £25.80 = **£27.60 per unit 1OF**

(4 marks)

Syllabus Topic 6: Standard Costing and Variances 6.3 (3), 6.5 (2) and 6.9 (5)

(c) (i) **Actual production and sales units**

Budgeted production and sales units	1,250	
Add Sales volume profit variance £10,080 / £112 =	90	½
Actual production and sales units	**1,340**	**1**

* Budgeted gross profit per unit = £480 – (£207.00 + £105.00 + £56.00) = **£112** ½
If candidates deduct 90 from 1250 (rather than add) award max of 1 mark.

(2 marks)

(ii) **Actual sales revenue**

		£		
Budgeted sales revenue	1,250 units x £480	600,000		
Add Increased sales revenue	**90** units x £480	43,200	**1 OF**	
Actual sales @ standard price		643,200		
Less: Sales price variance		– 15,700	**1**	
		627,500	**1 OF**	(3 marks)

(iii) **Actual direct material cost**

		£		
Standard cost of actual units	**1,340** units x £207.00	277,380	**1 OF**	
Add Material price variance		+ 9,660	½	
Less: Material usage variance		– 12,120	½	
		274,920	**1 OF**	(3 marks)

(iv) **Actual direct labour cost**

		£		
Standard cost of actual units	**1,340** units x £105.00	140,700	**OF**	
Add Labour efficiency variance		+ 13,400	½	
Less Labour rate variance		– 7,520	½	
		146,580	**1 OF**	

(2 marks)

Answers to (ii) (iii) and (iv) will depend on the units calculated in (i). **(Total 20 marks)**