



Mark Scheme

Series 4 2014  
**Results**

Pearson LCCI Level 3  
Cost Accounting (ASE3017)

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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 1: Materials and stock control (1.2, 1.4 and 1.6)

(a)

(i) Annual budgeted cost:

Component cost	(12,000 x £12.50)	=	£150,000	(½)
Ordering costs	(12 x £250)	=	£3,000	(1)
Holding costs	[(1,000 + 1,000/2) (1) x £12.50 x 0.12]	=	<u>£2,250</u>	(1)
Total annual cost		=	<u>£155,250</u>	(½ of no aliens, all 3 costs)

(ii) Average stock investment (1,000 + 1,000/2) x £12.50 = **£18,750** (1)

(5 marks)

(b) Economic order quantity:

$$= \sqrt{\frac{2 \times C_o \times D}{C_h}} \quad (1 - \text{method (can be substituted)})$$

$$= \sqrt{\frac{2 \times 250 \times 12,000}{0.12 \times 12.50}} \quad (1) \text{ numerator, } (1) \text{ denominator}$$

$$= \mathbf{2,000 \text{ units}} \quad (1 \text{ of})$$

(4 marks)

(c) Relevant annual total costs:

Relevant order size

2,000 units at £12.50 (EOQ)

4,000 units at £12.00 (4% discount)

(EOQ for component price of £12.00 is lower than 4,000 units hence not available.)

Relevant order sizes                      2,000 units @£12.50 (½)                      4,000 units @£12.00 (½)

	£	£
Component cost	150,000 (½ of)	144,000 (½ of)
Ordering costs	1,500 (½ of)	£750 (½ of)
Holding costs	<u>3,000</u> (½ of)	<u>£4,320</u> (½ of)
Total annual	<u>154,500</u> (½ of – all 3 costs)	<u>£149,070</u> (½ of – all 3 costs)

Order size that minimises total annual costs

**4,000 units** (1 of)

Average stock investment (1,000 + 4,000/2) x £12.00

**£36,000** (1 of)

(7 marks)

(d)

Ordering costs:

Costs related to the actual placing of the purchase order costs (1).

Examples include paperwork, postage, telephone, internet, email, purchasing officer's salary.

(½ mark for each example)

Stock holding costs:

Costs related to keeping stock safe and ready for use. (1)

Examples include: material handling, storekeeper's salary, insurance and interest.

(½ mark for each example)

(4 marks)

**(Total 20 marks)**

## QUESTION 2

### Syllabus Topic 2: Costing methods and systems (2.3, 2.4 and 2.5)

(a)

(i) Equivalent units

	Material	Labour	Overheads
Transfer to finished goods	10,000	10,000	10,000
Abnormal loss	600 (½)	600 (½)	600 (1/2)
Closing stock	1,000 (½)	300 (½)	300 (½)
Opening stock	(800) (½)	(600) (½)	(600) (½)
Total equivalent units	<b>10,800 (½)</b>	<b>10,300 (½)</b>	<b>10,300 (½)</b>
Costs	£66,000	£20,600	£30,900
Less scrap sales	1,200 (1)		
	<b>£64,800 (½)</b>		
Cost per unit	<b>£6.00 (½of)</b>	<b>£2.00 (½of)</b>	<b>£3.00 (½of)</b>

Workings:

Normal loss = 12,000 – (90% x 12,000) = 1,200 litres

Scrap sales = 1,200 x £1.00 = £1,200

Abnormal loss = (12,000 + 800) – (10,000 + 1,000 + 1,200) = 600 litres

Overhead cost = £20,600 x 18/12 = £30,900.

(9 marks)

(ii) Transfer to the finished goods

= cost of opening stock completed + cost of output wholly processed.

Opening WIP = £12,000 + [(800 – 600) x (£2 + £3)] = £13,000

(½)

Output wholly processed = (10,000 – 800) x (£6 + £2 + £3) = £101,200

(½)

= £13,000 + £101,200 = **£114,200 (1)**

Closing stock of work in progress

= 1,000 x £6 (1) + [300 x (£2 + £3)] = **£7,500 (1)**

(4 marks)

(b)

(i)

Process account					
	Litres	Cost £		Litres	Cost £
Opening WIP	800	12,000	Normal loss	1,200	1,200
Materials	12,000	66,000	Finished goods	10,000	114,200
Labour		20,600	Abnormal loss	600	6,600
Overheads		30,900 (½of)	Closing WIP	1,000	7,500
	<u>12,800</u>	<u>129,500 (½of)</u>		<u>12,800</u>	<u>129,500</u>

(ii)

Abnormal loss account					
	Litres	Cost £		Litres	Cost £
Process account	600	6,600 (1of)	Scrap account	600	600
	<u>600</u>	<u>6,600</u>	Profit and loss		6,000
				<u>600</u>	<u>6,600</u>

(7 marks)

**(Total 20 marks)**

### QUESTION 3

#### Syllabus Topic 3: Cost-volume-profit analysis (3.2 and 3.4)

(a) (i) Break-even point

Direct costs/overheads	Variable (£)	Fixed (£)
Direct material	84,000	
Direct labour	60,000	
Direct expenses	24,000	
Production overhead	24,000 (½)	50,000 (½)
Administration overhead		10,000
Selling overhead	<u>48,000</u> (½)	<u>40,000</u> (½)
	<u>240,000</u> (½)	<u>100,000</u> (½)

Selling price	(£336,000/12,000)	£28 (½)
Variable cost per unit	(£240,000/12,000)	<u>£20</u> (½)
Contribution per unit		<u>£8</u> (1)

Break-even point (units)	(£100,000/£8)	<b>12,500 units</b> (1of)
Break-even point (revenue)	(12,500 x £28)	<b>£350,000</b> (1of)

(7 marks)

(ii) Profit from sale of 14,000 units

Total contribution	(14,000 x £8 per unit)	£112,000 (1of)
Less fixed costs		<u>£100,000</u>
Profit		<u>£12,000</u> (1of)

(2 marks)

(iii) Number of unit sales for a profit of £20,000

Total contribution required	(£20,000 + £100,000)	£120,000 (1)
Number of units	(£120,000/£8)	<b>15,000 units</b> (1of)

(2 marks)

(b)

Suggestion 1

Unit contribution	£8	
Less decrease in unit selling price	(£3)	(½)
Plus reduction in material unit cost	<u>£2</u>	(½)
New unit contribution	<u>£7</u>	(1)
Total contribution required	(£26,000 + £100,000)	£126,000 (1)
Number of units required	(£126,000/£7)	<b>18,000 units</b> (1)

Suggestion 2

Unit contribution	£8	
Plus increase in unit selling price	£1	(½)
Plus reduction in material unit cost	<u>£2</u>	(½)
New unit contribution	<u>£11</u>	(1)
New fixed cost	(£50,000 + £100,000)	£150,000 (1)
Total contribution required	(£26,000 + £150,000)	£176,000 (1)
Number of units required	(£176,000/£11)	<b>16,000 units</b> (1)

(9 marks)

**(Total 20 marks)**

#### QUESTION 4

#### Syllabus Topic 4: Budgetary planning and control (4.1, 4.6 and 4.9)

(a) Budget statement for Month 1 based on 2,325 paying journeys

	Flexed budget	Actual	Variance
	km	km	km
Vehicle travel (with customers)	27,900 (1)	28,700	800A (½of)
Vehicle travel (without customers)	9,300 (1)	9,100	200F (½of)
	£	£	£
Income from customers	21,390 (1)	22,390	1,000F (½of)
Costs			
Fuel	3,348 [2]	3,498	150A (½of)
Wages	7,180 [2]	7,030	150F (½of)
Maintenance	800 (1)	850	50A (½of)
Office	2,000 (½)	2,250	250A (½of)

Workings:

#### Vehicle travel (with customers)

24,000 budgeted for 2,000 journeys (24,000/2,000) = 12 km per journey

31,200 budgeted for 2,600 journeys (31,200/2,600) = 12 km per journey

**2,325 journeys** (2,325 x 12) = **27,900 km (1)**

#### Vehicle travel (without customers)

8,000 budgeted for 2,000 journeys (8,000/2,000) = 4 km per journey

10,400 budgeted for 2,600 journeys (10,400/2,600) = 4 km per journey

**2,325 journeys** (2,325 x 4) = **9,300 (1)**

#### Income from customers

Income per journey @ 2,000 journeys (18,400/2,000) = £9.20

Income per journey @ 2,600 journeys (23,920/2,600) = £9.20

**Income from 2,325 journeys** (2,325 x £9.2) = **£21,390 (1)**

#### Fuel cost

At 2,000 journeys [£2,880/(24,000 + 8,000)] = £0.09 per km travel (1)

At 2,600 journeys [£3,744/(31,200 + 10,400)] = £0.09 per km travel

2,325 journeys (27,900 + 9,300) = 37,200km travel

**Cost for 2,325 journeys** (37,200 x £0.09) = **£3,348 (1of)**

#### Driver wages

At 2,000 journeys: £6,400 = Fixed wage + (24,000 x travel rate)

At 2,600 journeys: £7,840 = Fixed wage + (31,200 x travel rate)

£1,440 = 7,200 x travel rate

Travel rate = £1440/7,200 = £0.20 per km travel (1)

Fixed wage = [£6,400 - (24,000 x 0.20)] = £1,600

Fixed wage = [£7,840 - (31,200 x 0.20)] = £1,600

**Cost for 2,325 journeys** 1,600 + (27,900 x 0.20) = **£7,180 (1of)**

(12 marks)

(b) A forecast is an estimate for future income or expense. (1) A budget is a plan of action (expressed in terms relating to a future period). (1) Ideally, it should encompass all the activities of the business (1) and should involve personnel throughout the organisation in its preparation (1).

(4 marks)

(c) A fixed budget is based on one level of activity. (1) A flexible budget changes in response to changes in activity. (1)

(2 marks)

(d) An objective of preparing flexible budgets is to allow costs to be predicted for the actual levels of activity that occur (1).

An objective is to allow the meaningful comparison of actual costs with budgets (1).

(2 marks)

**(Total 20 marks)**

**QUESTION 5**

**Syllabus Topic 5: Standard costing and variances (5.3, 5.4, 5.5, 5.10, 5.11 and 5.14)**

(a)

(i) Budgeted gross profit:

Sales (500 x £75)	£37,500 (½)
Production costs (500 ½ x £38)	<u>£19,000 (½of)</u>
Gross profit	<u>£18,500 (½of)</u>

$£(75 - 38) (1) \times 500 (½) = £18,500 (½of)$

(ii) Actual gross profit:

Sales	£38,400
Direct material	£2,970
Direct labour	£4,860
Variable production overheads	£1,350
Fixed production overheads	<u>£11,880</u>
	£21,060 (1)
Less closing stock	<u>£2,280 (1)</u>
Production cost of sales	<u>£18,780 (1of)</u>
Gross profit	<u>£19,620 (1of)</u>

Workings: Closing stock (540 – 480) x £38 = £2,280

(6 marks)

(b) Variances:

		£
Sales price	(480 x 75) – 38,400 (1)	2,400 F (1)
Sales volume profit	(500 – 480) x 18,500/500 (1)	740 A (1)
Direct material	(540 x 6) – 2,970	270 F (1)
Direct labour	(540 x 10) – 4,860	540 F (1)
Variable overhead	(540 x 2) – 1350	270 A (1)
Fixed o/h expenditure	(520 x 20) – 11,880 (1)	1,480 A (1)
Fixed o/h volume	(520 – 540) x 20 (1)	400 F (1)

(lose ½ mark if description of variance is incorrect)

(11 marks)

(c) Profit reconciliation

Budgeted profit		18,500 (½of)
Variances:		
Sales	2,400 F	
Sales volume profit	<u>740 A</u>	1,660F (1of)
Direct material	270 F	
Direct labour	540 F	
Variable overhead	270 A	
Fixed o/h expenditure	1,480 A	
Fixed o/h volume	<u>400 F</u>	<u>540A (1of)</u>
Actual profit		<u>1,120F</u> <u>19,620 (½of)</u>

(3 marks)

**(Total 20 marks)**