



**LCCI**  
International  
Qualifications



**L4**

**Pearson  
LCCI Level 4 Certificate  
in Management Accounting  
(VRQ)**

**(ASE20102)**

**SAMPLE ASSESSMENT MATERIALS**

**Issue 2**

For first teaching from September 2015

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This sample assessment material is Issue 2. Key changes are sidlined in the document. We will inform centres of any changes to this issue. The latest issue can be found on our website, [qualifications.pearson.com](http://qualifications.pearson.com)

## Acknowledgements

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# Pearson LCCI

## Certificate in Management Accounting (VRQ)

Level 4

Sample assessment material for first teaching  
September 2015  
**Time: 3 hours**

Paper Reference

**ASE20102**

**Complete the details below in block capitals.**

Candidate name

Centre Code

Candidate Number

Candidate ID Number

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen  
– *pencil can only be used for graphs, charts, diagrams, etc.*
- **Fill in the boxes** at the top of this page with your name, candidate number, centre code and your candidate ID number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- Answers should be given to an appropriate degree of accuracy.

### Information

- The total mark for this paper is 120.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

### Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- You are advised to show your workings.
- Check your answers if you have time at the end.

Turn over ►

S48190A

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**PEARSON**

**Answer ALL questions. Write your answers in the spaces provided.**

- 1** Woodham plc is a company that manufactures a product called the CR3.

**Sales of CR3 units**

<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>
13 500	14 760	16 020	19 980

10% of CR3 units produced are discovered to be defective and have to be thrown away.

One CR3 unit contains 2.5 kg of Material X.

The directors of Woodham plc have decided that each month's closing inventory of CR3 units should represent 75% of the following month's sales.

The directors have also decided that the inventory of Material X, which at the start of July will be 28 000 kg, should be reduced at a rate of 1 000 kg per month.

Woodham plc can buy up to 45 000 kg of Material X per month from its usual supplier at a cost of \$6.00 per kg. Any extra Material X would have to be bought from an alternative supplier at a cost of \$7.20 per kg.

All Material X is bought in the same month it is used in production.

(a) Prepare a production budget for CR3 units for the period July to September.

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(b) Prepare a purchase budget for Material X, showing quantity (kg) and monetary value (\$), for the period July to September.

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(c) You are the Cost Accountant for Woodham plc. The total demand for CR3 is 216 000 units per year. You are concerned about Material X having to be purchased for \$7.20 per kg.

Analyse whether Woodham plc should change their production budget or their materials purchases budget.

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**(Total for Question 1 = 20 marks)**

**BLANK PAGE**  
**QUESTION 2 BEGINS ON THE NEXT PAGE.**

2 Hayes plc manufactures Product E.

**Budgeted and actual costs in June for Product E**

	<b>Budgeted</b>		<b>Actual</b>	
<b>Production</b>	8 000 units		9 600 units	
<b>Material costs</b>	3 600 kg	\$16 200	4 680 kg	\$19 890
<b>Labour costs</b>	1 200 hours	\$10 560	1 610 hours	\$15 617
<b>Overheads</b>	\$17 040		\$18 123	
<b>Total costs</b>	\$43 800		\$53 630	

The material and labour costs are variable and overheads are fixed. Overheads are absorbed on the basis of direct labour hours.

**Overhead variances at the end of June**

Expenditure variance	\$1 083 A
Volume variance	\$3 408 F
Capacity variance	\$5 822 F
Efficiency variance	\$2 414 A

(a) Describe what is meant by a basic standard

(2)

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(b) Identify **one** factor that would be responsible for June's:

(i) overhead expenditure variance

(1)

(ii) overhead volume variance.

(1)

(c) Calculate, showing your workings, the following variances for June:

(i) material usage (quantity) variance

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(ii) material price variance

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(iii) total material cost variance

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(iv) labour efficiency variance

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(v) labour rate variance

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(vi) total labour cost variance.

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(b) (i) Define the term **sustainability**.

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(ii) Explain the elements of the triple bottom line in the context of sustainability.

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(c) Evaluate which of the two proposed measures by Battlesbridge plc best promotes sustainability.

(12)

A series of horizontal dotted lines for writing the answer.

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**(Total for Question 3 = 24 marks)**



- 4 Hong Kong Leisure is a coach company that operates two types of service. One service carries passengers on short trips and the other carries passengers on long trips.

**Financial results of 2014 for Hong Kong Leisure**

	<b>Short trips</b>
	\$000
Revenue	2 400
<b>Direct costs</b>	
Fuel costs	720
Driver wages	1 008
Gross profit	672
Overhead costs and other expenses	544
Net (operating) profit	128
Capital employed	1 140

**Passenger mile information for short trips**

Actual passenger miles*	9.6 million
Maximum possible passenger miles	12 million

\*A passenger mile is one passenger travelling one mile, e.g. 25 passengers on a 100-mile trip would represent 2 500 passenger miles.

- (a) Calculate the following performance indicators for short trips in 2014. Where appropriate, you should give your answer to three decimal places.

(i) Turnover per passenger mile (\$)

(1)

(ii) Gross profit (%)

(1)

(iii) Overheads and other expenses ratio (%) (1)

(iv) Net (operating) profit (%) (1)

(v) Fuel costs per passenger mile (\$) (1)

(vi) Drivers' wages per passenger mile (\$) (1)

(vii) Return on capital employed (%) (1)

(viii) Passenger miles achieved (%) (1)



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(c) Explain **two** non-financial performance indicators that Hong Kong Leisure could use to judge the performance of short trips and long trips in 2014.

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**(Total for Question 4 = 24 marks)**

**5** Wickford plc produces products A, B and C.

The trainee accountant has used predictions from the sales department about the likely demand for each product in a forecasted statement for July.

**Forecasted statement for July**

	<b>A</b>	<b>B</b>	<b>C</b>
Sales	2 000 units	5 000 units	3 000 units
Revenue	\$27 900	\$79 750	\$59 850
Material cost	\$9 000	\$34 500	\$24 300
Direct labour cost	\$4 000	\$12 000	\$14 400
Fixed overheads	\$8 400	\$21 000	\$12 600
Variable overheads	\$2 100	\$3 750	\$2 500
Profit/loss	\$4 400	\$8 500	\$6 050
Machine hours per unit	0.03	0.04	0.06

- Material and labour costs are variable in nature.
- Material costs are \$6.00 per kg and wage rate for direct labour is \$8.00 per hour.
- The monthly overheads are fixed and have been apportioned on the basis of units sold.

After the July statement was produced, the trainee accountant admitted that he had not considered various inputs which may have been limited.

It was discovered by a manager that the following inputs were not considered:

- only 12 000 kg of material would be available in July
- only 4 250 direct labour hours would be available
- the maximum number of machine hours available would be 375.

The trainee accountant was worried about whether the figures in his July statement were still accurate.

(a) Determine whether each of the three inputs identified by the manager present a limiting factor. You must show your workings.

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**(Total for Question 5 = 26 marks)**

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**TOTAL FOR PAPER = 120 MARKS**





Mark Scheme

Sample Assessment Materials

Pearson LCCI  
Level 4 Certificate in  
Management Accounting (VRQ)  
(ASE20102)

## 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.
- Where marks are awarded for own figure answers, these marks can only be awarded if evidence of how the candidate arrived at their values has been provided (their workings).
- If candidates fail to provide their workings when instructed in the paper, it may not be possible to achieve all marks associated with the question, even if the final answer is correct.
- For calculation questions, full marks can be awarded where correct answer is seen with no workings shown, unless question states that candidate must provide workings.

## Abbreviations

**of**                    **Own Figure rule**

Accuracy marks can be awarded where the candidates' answer does not match the mark scheme, though is accurate based on their valid method.

**cao**                    **Correct Answer Only rule**

Accuracy marks will only be awarded if the candidates' answer is correct, and in line with the mark scheme.

Question	Answer (AO2) 6	Mark																																														
1(a)	<p><b>Award 1 mark for each row in the Production Budget.</b></p> <table border="1" data-bbox="411 387 1315 622"> <thead> <tr> <th></th> <th>July</th> <th>Aug</th> <th>Sep</th> </tr> </thead> <tbody> <tr> <td>Sales</td> <td>13 500</td> <td>14 760</td> <td>16 020</td> </tr> <tr> <td>Closing Stock</td> <td>11 070</td> <td>12 015</td> <td>14 985</td> </tr> <tr> <td>Opening Stock</td> <td>(10 125)</td> <td>(11 070)</td> <td>(12 015)</td> </tr> <tr> <td>Production (good)</td> <td>14 445</td> <td>15 705</td> <td>18 990</td> </tr> <tr> <td>Production (total)</td> <td>16 050</td> <td>17 450</td> <td>21 100</td> </tr> <tr> <td>Substandard units</td> <td>(1 605)</td> <td>(1 745)</td> <td>(2 110)</td> </tr> </tbody> </table> <p><b>Sales and Opening stock are not own figure. Substandard units are own figure.</b></p> <p><b>Workings:</b></p> <ul style="list-style-type: none"> <li>1 mark for calculating all three closing stock levels of CR3 units for July, August and September, e.g.</li> </ul> <table border="1" data-bbox="411 913 1286 1088"> <tbody> <tr> <td>July</td> <td>75% of 14 760 (previous month's CR3 unit sales) = 11 070</td> </tr> <tr> <td>August</td> <td>12 015</td> </tr> <tr> <td>September</td> <td>14 985</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>1 mark for calculating the number of good (non-defective) CR3 units that need to be produced for July, August and September, e.g.</li> </ul> <table border="1" data-bbox="411 1249 1289 1451"> <tbody> <tr> <td>July</td> <td>16 050 (production total) - 1 605 (no. of defective units) = 14 445 (apply of rule)</td> </tr> <tr> <td>August</td> <td>15 705 (apply of rule)</td> </tr> <tr> <td>September</td> <td>18 990 (apply of rule)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>1 mark for calculating the total number of CR3 units that need to be produced for July, August and September (before deducting the defective units), e.g.</li> </ul> <table border="1" data-bbox="411 1612 1323 1854"> <tbody> <tr> <td>July</td> <td>14 445 (no. of good CR3 units) x 100 = 1 444 500 /90 = 16 050 (apply of rule)</td> </tr> <tr> <td>August</td> <td>17 450 (apply of rule)</td> </tr> <tr> <td>September</td> <td>21 100 (apply of rule)</td> </tr> </tbody> </table> <p>Accept any reasonable responses.</p>		July	Aug	Sep	Sales	13 500	14 760	16 020	Closing Stock	11 070	12 015	14 985	Opening Stock	(10 125)	(11 070)	(12 015)	Production (good)	14 445	15 705	18 990	Production (total)	16 050	17 450	21 100	Substandard units	(1 605)	(1 745)	(2 110)	July	75% of 14 760 (previous month's CR3 unit sales) = 11 070	August	12 015	September	14 985	July	16 050 (production total) - 1 605 (no. of defective units) = 14 445 (apply of rule)	August	15 705 (apply of rule)	September	18 990 (apply of rule)	July	14 445 (no. of good CR3 units) x 100 = 1 444 500 /90 = 16 050 (apply of rule)	August	17 450 (apply of rule)	September	21 100 (apply of rule)	<b>(6)</b>
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Question		Mark						
<b>1(b) cont'd</b>	<ul style="list-style-type: none"> <li>1 mark for calculating the cost of additional Material X from an alternative source for September, e.g.             (51 750 kg (purchase quantity of Material X in September) – 45 000 kg (maximum Woodham plc can buy in a month)            x \$7.20 (alternative supplier cost)            = \$48 600 (apply of rule)</li> <li>1 mark for calculating the cost of purchases for July, August and September, e.g.</li> </ul> <table border="1" data-bbox="411 636 1315 1028"> <tbody> <tr> <td data-bbox="411 636 624 763">July</td> <td data-bbox="624 636 1315 763">           39 125 kg (purchase quantity)            x \$6.00 (usual supplier cost)            = \$234 750            (apply of rule)         </td> </tr> <tr> <td data-bbox="411 763 624 831">August</td> <td data-bbox="624 763 1315 831">           \$255 750 (apply of rule)            Note: calculated the same way as the July figure         </td> </tr> <tr> <td data-bbox="411 831 624 1028">September</td> <td data-bbox="624 831 1315 1028">           45 000 (purchase quantity)            x \$6.00 (usual supplier cost)            = \$270 00            + \$48 000 (alternative supplier cost)            = \$318 600            (apply of rule)         </td> </tr> </tbody> </table> <p data-bbox="411 1061 871 1095">Accept any reasonable responses.</p>	July	39 125 kg (purchase quantity) x \$6.00 (usual supplier cost) = \$234 750 (apply of rule)	August	\$255 750 (apply of rule) Note: calculated the same way as the July figure	September	45 000 (purchase quantity) x \$6.00 (usual supplier cost) = \$270 00 + \$48 000 (alternative supplier cost) = \$318 600 (apply of rule)	<p data-bbox="1342 1095 1393 1128"><b>(6)</b></p>
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Question	Indicative Content (AO3) 4, (AO4) 4	Mark
1(c)	<p><b>Production Budget - Positives:</b></p> <ul style="list-style-type: none"> <li>Producing a one year production budget would allow the production to be smoothed out/the same each month at 18 000 units of CR3 per month.</li> <li>This would avoid the need to purchase more than 45 000 kilos in one month.</li> <li>Total cost of purchasing Material X could be reduced by \$8 100.</li> </ul> <p><b>Materials Purchases Budget - Positives:</b></p> <ul style="list-style-type: none"> <li>Avoiding purchasing more than 45 000 kilos in one month could reduce the cost of materials by \$8 100.</li> <li>Does Material X have to be used in the same month as purchase? ie is it perishable?</li> </ul> <p><b>Production Budget - Negatives:</b></p> <ul style="list-style-type: none"> <li>Would a production plan of the same quantity each month suit the customers?</li> <li>Will there be higher stock holding costs for CR3, if monthly production does not meet monthly demand?</li> <li>Will there be higher stock holding costs for Material X?</li> </ul> <p><b>Materials Purchases Budget - Negatives:</b></p> <ul style="list-style-type: none"> <li>Will there be higher stock holding costs for Material X?</li> <li>Is there the physical capacity for holding larger quantities of stock?</li> </ul>	(8)

Level	Mark	Descriptor
	0	No rewardable material
<b>Level 1</b>	1-2	Displays limited application. A largely descriptive approach with unsupported or generalised examples, which are not related to the question scenario. Factors to support a logical chain of reasoning are not present or are not examined methodically.
<b>Level 2</b>	3-5	Displays application in an appropriate context. A largely descriptive approach with examples drawn from the question scenario. Some factors to support a chain of reasoning are identified but are not examined methodically.
<b>Level 3</b>	6-8	Displays an understanding of considerations, which are applied in a relevant context. Displays ability to link knowledge and understanding using relevant examples and inferences drawn from the question scenario. Displays an understanding of the essential themes present in the question scenario broken down into their constituent parts in order present a logical and coherent chain of reasoning.

Question	Answer (AO1) 2	Mark
2(a)	<p><b>Award 1 mark for each point identified, up to 2 marks e.g.</b></p> <ul style="list-style-type: none"> <li>• Basic standard is a standard that is established when an activity is first undertaken (1) and has not been changed or updated for a long time (1)</li> </ul> <p>Accept any reasonable responses.</p>	(2)

Question	Answer (AO1) 1	Mark
2(b)(i)	<p><b>Award 1 mark for the identification of an expenditure variance factor, e.g.</b></p> <ul style="list-style-type: none"> <li>• Overheads are not entirely fixed and the increase in output has caused costs to rise</li> <li>• Poor control of costs</li> <li>• Underestimation of increases in costs</li> </ul> <p>Accept any reasonable responses.</p>	(1)

Question	Answer (AO1) 1	Mark
2(b)(ii)	<p><b>Award 1 mark for the identification of a volume variance factor, e.g.</b></p> <ul style="list-style-type: none"> <li>• The company produced more units than budgeted</li> </ul> <p>Accept any reasonable responses.</p>	(1)

Question	Answer (AO2) 4	Mark
2(c)(i)	<p><b>Award 1 mark for each part of the calculation and 1 mark for variance, including correct sign, up to 4 marks.</b></p> <ul style="list-style-type: none"> <li>• 1 mark for the calculation of the standard material quantity, e.g.  <math display="block">\begin{aligned} &amp;3\,600 \text{ kg (budgeted material quantity)} \\ &amp;/8\,000 \text{ (budgeted production of Product E units)} \\ &amp;= 0.45 \\ &amp;\times 9\,600 \text{ (actual production of Product E units)} \\ &amp;= 4\,320 \text{ kg} \end{aligned}</math></li> <li>• 1 mark for the calculation of the standard material price, e.g.  <math display="block">\begin{aligned} &amp;\\$16\,200 \text{ (budgeted material cost)} \\ &amp;/3\,600 \text{ kg (budgeted material quantity)} \\ &amp;= \\$4.50/\text{kg} \end{aligned}</math></li> <li>• 1 mark for the calculation of the material usage (quantity) variance, e.g.  <math display="block">\begin{aligned} &amp;4\,320 \text{ kg (standard material quantity)} \\ &amp;- 4\,680 \text{ kg (actual material quantity)} \\ &amp;= -360 \\ &amp;\times \\$4.50/\text{kg (standard material price)} \end{aligned}</math></li> <li>• 1 mark for the correct answer = \$1 620 A (accept of rule)</li> </ul> <p>Accept any reasonable responses.</p>	<b>(4)</b>

Question	Answer (AO2) 3	Mark
2(c)(ii)	<p><b>Award 1 mark for each part of the calculation and 1 mark for variance, including correct sign, up to 3 marks.</b></p> <ul style="list-style-type: none"> <li>1 mark for the calculation of the actual material price, e.g.  <math>\\$19\,890</math> (actual material cost)  <math>/4\,680</math> kg (actual material quantity)  <math>= \\$4.25/\text{kg}</math></li> <li>1 mark for the calculation of the material price variance, e.g.  <math>(\\$4.50/\text{kg}</math> (standard material price) <math>- \\$4.25/\text{kg}</math> (actual material price))  <math>\times 4\,680</math> (actual material quantity)</li> <li>1 mark for the correct answer = <math>\\$1\,170</math> F            (accept of rule)</li> </ul> <p>Accept any reasonable responses.</p>	<b>(3)</b>

Question	Answer (AO2) 1	Mark
2(c)(iii)	<p><b>Award 1 mark for correct answer</b></p> <p>Total material cost variance = <math>\\$1\,620</math> A + <math>\\$1\,170</math> F = <math>\\$450</math> A            (apply o/f rule) (1)</p>	<b>(1)</b>

Question	Answer (AO2) 4	Mark
2(c)(iv)	<p><b>Award 1 mark for each part of the calculation and 1 mark for variance, including correct sign, up to 4 marks.</b></p> <ul style="list-style-type: none"> <li>• 1 mark for the calculation of standard labour quantity, e.g.  1 200 hours (budgeted labour hours)  /8 000 (budgeted production of Product E units)  = 0.15  x 9 600 (actual production of Product E units)  = 1 440 Direct Labour Hours (DLH)</li> <li>• 1 mark for the calculation of the standard labour price, e.g.  \$10 560 (budgeted labour hour cost)  /1 200 hours (budgeted labour hours)  = \$8.80/DLH</li> <li>• 1 mark for the calculation of the labour efficiency variance, e.g.  1 440 (standard labour quantity)  – 1 610 (actual labour hours)  = -170  x \$8.80/DLH (standard labour price)</li> <li>• 1 mark for the correct answer = \$1 496 A (accept of rule)</li> </ul> <p>Accept any reasonable responses.</p>	<b>(4)</b>

Question	Answer (AO2) 3	Mark
2(c)(v)	<p><b>Award 1 mark for each part of the calculation and 1 mark for variance, including correct sign, up to 3 marks e.g.</b></p> <ul style="list-style-type: none"> <li>1 mark for the calculation of the actual labour price, e.g.  <math>\\$15\,617</math> (actual labour hourly cost)  <math>/1\,610</math> hours (actual labour hours)  <math>= \\$9.70/\text{DLH}</math></li> <li>1 mark for the calculation of the labour rate variance, e.g.  <math>\\$8.80/\text{DLH}</math> (standard labour price) <math>- \\$9.70/\text{DLH}</math> (actual labour price)  <math>= -0.9</math>  <math>\times 1\,610</math> hours (actual labour hours)</li> <li>1 mark for the correct answer = <math>\\$1\,449</math> A (accept of rule)</li> </ul> <p>Accept any reasonable responses.</p>	<b>(3)</b>

Question	Answer (AO2) 1	Mark
2(c)(vi)	<p><b>Award 1 mark for correct answer</b></p> <p>Total labour cost variance = <math>\\$1\,496</math> A + <math>\\$1\,449</math> F = <math>\\$2\,945</math> A          (apply o/f rule) (1)</p>	<b>(1)</b>

Question	Answer (AO2) 6	Mark																														
2(d)	<table border="1" data-bbox="411 293 1114 629"> <tr><td>Standard Cost</td><td></td><td></td></tr> <tr><td>Material usage (quantity)</td><td></td><td></td></tr> <tr><td>Material price</td><td></td><td></td></tr> <tr><td>Labour efficiency</td><td></td><td></td></tr> <tr><td>Labour rate</td><td></td><td></td></tr> <tr><td>Overhead expenditure</td><td></td><td></td></tr> <tr><td>Overhead volume</td><td></td><td></td></tr> <tr><td>Overhead capacity</td><td></td><td></td></tr> <tr><td>Overhead efficiency</td><td></td><td></td></tr> <tr><td>Actual cost</td><td></td><td></td></tr> </table> <p data-bbox="411 663 1310 757"><b>Award 1 mark for the calculation of the budgeted cost and award 4 marks for showing variances award 1 mark for the calculation/insertion of the budgeted cost, up to 5 marks.</b></p> <ul data-bbox="411 792 1070 826" style="list-style-type: none"> <li>• 1 mark for calculating the standard cost, e.g.</li> </ul> <p data-bbox="411 860 1031 987"> <math display="block">\begin{aligned} &amp; \\$43\,800 \text{ (budgeted total cost)} \\ &amp; \times 9\,600 \text{ (actual production of Product E units)} \\ &amp; = 420\,480\,000 \\ &amp; /8\,000 \text{ (No. of budgeted units)} = \\$52\,560 \end{aligned}</math> </p> <ul data-bbox="411 1021 1257 1084" style="list-style-type: none"> <li>• 1 mark for showing material usage (quantity) and material price variances or total material variance, e.g.</li> </ul> <p data-bbox="411 1117 1315 1245"> <math display="block">\begin{aligned} \text{Material usage (quantity)} &amp;= \\$1\,620 \text{ A (apply of rule)} \\ \text{Material price} &amp;= \\$1\,170 \text{ F (apply of rule) or} \\ \text{Total material variance} &amp;= \\$1\,620 \text{ A} + \\$1\,170 \text{ F} = \\$450 \text{ A (apply of rule)} \end{aligned}</math> </p> <ul data-bbox="411 1279 1310 1341" style="list-style-type: none"> <li>• 1 mark for showing labour efficiency and labour rate variances or total labour variance, e.g.</li> </ul> <p data-bbox="411 1375 1283 1503"> <math display="block">\begin{aligned} \text{Labour efficiency} &amp;= \\$1\,496 \text{ A (apply of rule)} \\ \text{Labour rate} &amp;= \\$1\,449 \text{ A (apply of rule) or} \\ \text{Total labour variance} &amp;= \\$1\,496 \text{ A} + \\$1\,449 \text{ A} = \\$2\,945 \text{ A (apply of rule)} \end{aligned}</math> </p> <ul data-bbox="411 1536 1222 1570" style="list-style-type: none"> <li>• 1 mark for showing overhead expenditure variance, e.g.</li> </ul> <p data-bbox="411 1603 876 1637">Overhead expenditure = \$1 083 A</p> <ul data-bbox="411 1671 1310 1733" style="list-style-type: none"> <li>• 1 mark for showing overhead capacity and overhead efficiency variances or total overhead volume variance, e.g.</li> </ul> <p data-bbox="411 1767 1147 1895"> <math display="block">\begin{aligned} \text{Overhead capacity} &amp;= \\$5\,822 \text{ F} \\ \text{Overhead efficiency} &amp;= \\$2\,414 \text{ A or} \\ \text{Total overhead volume variance} &amp;= \\$5\,822 + \\$2\,414 = \\ &amp; \\$3\,408 \text{ F} \end{aligned}</math> </p> <p data-bbox="411 1928 871 1962">Accept any reasonable responses.</p>	Standard Cost			Material usage (quantity)			Material price			Labour efficiency			Labour rate			Overhead expenditure			Overhead volume			Overhead capacity			Overhead efficiency			Actual cost			(6)
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Question	Answer (AO1) 3, (AO3) 3	Mark
3(a)	<p><b>1 mark for identifying each weakness, and 1 mark for developing each weakness, up to six marks e.g.</b></p> <ul style="list-style-type: none"> <li>• The approach can be used only for short-term forecasts (1) as linear movements in trends are unlikely to last long term (1).</li> <li>• This approach assumes that the trend will be affected only by the passing of time (1) and fails to consider cyclical or other factors (1).</li> <li>• This approach fails to consider other valuable sources of information that may be more relevant (1). This might include reports from sales or market research teams (1).</li> </ul> <p>Accept any reasonable responses.</p>	(6)
3(b)(i)	<p><b>Award 1 mark each for an aspect of sustainability, up to 2 marks, e.g.</b></p> <ul style="list-style-type: none"> <li>• The meeting of current needs (1) without compromising the needs of future generations (1)</li> </ul> <p>Accept any reasonable responses.</p>	(2)
3(b)(ii)	<p><b>Answer (AO1) 1, (AO3) 3</b></p> <p><b>Award 1 mark for identifying all three elements of the triple bottom line.</b></p> <ul style="list-style-type: none"> <li>• Economic, social and environmental (1)</li> </ul> <p><b>Award 1 mark for developing each element in context of sustainability, up to 3 marks, e.g.</b></p> <ul style="list-style-type: none"> <li>• Economic – this refers to the economic welfare of the organisation, community or nation (1)</li> <li>• Social – this refers to the needs of the workers, families, local community or population (1)</li> <li>• Environmental – this refers to green issues, pollution or climate change (1)</li> </ul> <p>Accept any reasonable responses.</p>	(4)



Question	Indicative content (AO3) 4, (AO4) 4, (AO5) 4
3(c)	<p><b>Arguments in favour of sustainability:</b></p> <ul style="list-style-type: none"> <li>• Relocation will reduce factory costs like rent and rates – this will improve the company’s profitability and help it to survive.</li> <li>• Relocation will reduce wage bill by 30% – this will improve the company’s profitability and enable it to survive.</li> <li>• New technology will reduce production costs by 20% – this will improve the company’s profitability and enable it to survive.</li> <li>• Move will create new employment opportunities and boost the local economy in the new location, which satisfies the economic element of the triple bottom line.</li> <li>• The company may get incentives from local government agencies for creating employment in a deprived area – this will help to reduce the company’s costs and improve its profitability.</li> </ul> <p><b>Arguments against sustainability:</b></p> <ul style="list-style-type: none"> <li>• Factory is not insulated and this will result in high fuel costs of heating – this will reduce the company’s profitability and be bad for the environment.</li> <li>• Workers will be cold and working conditions will be unpleasant – this does not support the social element of the triple bottom line.</li> <li>• The move away will cause local unemployment and will harm the local economy – this will not support the social element of the triple bottom line.</li> <li>• Introducing new technology will cause up to 2 250 job losses – this will harm the local economy and not support the economic element of the triple bottom line.</li> <li>• New technology may cause more pollution than older methods – this is not good for the environment and does not support the environmental element of the triple bottom line.</li> </ul> <p>Candidates should draw together/value their arguments to provide a reasoned judgement/decision.</p>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	Question not attempted or response completely irrelevant or inaccurate
<b>Level 1</b>	1-3	Displays limited application of accounting theories or concepts in an appropriate context. A largely descriptive approach with unsupported or generalised examples, which are not related to the question scenario. Factors to support a logical chain of reasoning are not present or are not examined methodically. A supported conclusion is not present or the conclusion presented is not supported by evidence drawn from the question scenario.
<b>Level 2</b>	4-7	Displays application of accounting theories or concepts in an appropriate and relevant context. A largely descriptive approach with examples drawn from the question scenario. Factors to support a chain of reasoning are identified and supported by evidence drawn from the question scenario but are not examined methodically and the chain of reasoning presented is not sufficiently well developed or balanced to support a robust supported conclusion.
<b>Level 3</b>	8-12	Displays an understanding of accounting theories or concepts, which are applied in a relevant context. Displays the ability to link knowledge and understanding using relevant examples and inferences drawn from the question scenario. Displays an understanding of the essential themes present in the question scenario broken down into their constituent parts in order to present a logical and coherent chain of reasoning. Careful consideration is given to all relevant factors drawn from the question scenario with additional evidence drawn from relevant theory in order to present a reasoned and logically robust conclusion.

Question	Answer (AO2) 1	Mark
4(a)(i)	<p><b>Award 1 mark for correct answer for turnover per passenger mile (\$):</b></p> <p>2 400 (turnover) /9 600 (actual passenger miles) = \$0.25</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(ii)	<p><b>Award 1 mark for correct answer for gross profit (%):</b></p> <p>672 (gross profit) / 2 400 (turnover) = 0.28 x 100 = 28.00% (to 2 decimal places)</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(iii)	<p><b>Award 1 mark for correct answer for overhead and other expenses (%):</b></p> <p>544 (overhead costs and other expenses) /2 400 (turnover) = 0.2267 x 100 = 22.67% (2d.p.)</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(iv)	<p><b>Award 1 mark for correct answer for net operating profit (%):</b></p> <p>128 (net operating profit) /2 400 (turnover) = 0.0533 x 100 = 5.33% (2d.p.)</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(v)	<p><b>Award 1 mark for correct answer for fuel costs per passenger mile (\$):</b></p> <p>720 (fuel costs)  /9 600 (actual passenger miles)  = \$0.075 (3d.p.)</p> <p>Answer must be to 3d.p.</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(vi)	<p><b>Award 1 mark for correct answer for drivers' wages per passenger mile (\$):</b></p> <p>1 008 (driver wages)  /9 600 (actual passenger miles)  = 0.105  × 100  = \$0.105</p> <p>Answer must be to 3d.p.</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(vii)	<p><b>Award 1 mark for correct answer for return on capital employed (%):</b></p> <p>128 (net (operating) profit)  /1 140 (capital employed)  = 0.1123  × 100  = 11.23% (2d.p.)</p>	(1)

Question	Answer (AO2) 1	Mark
4(a)(viii)	<p><b>Award 1 mark for correct answer for passenger miles (%):</b></p> <p>9 600 (actual passenger miles) profit  /12 000 (maximum possible passenger miles)  = 0.8  × 100  = 80.00% (2d.p.)</p>	(1)

Question	Indicative content (AO3) 4, (AO4) 4, (AO5) 4
4(b)	<p><b>Arguments in favour of short trips:</b></p> <p>Short trips provide:</p> <ul style="list-style-type: none"> <li>• Better turnover per mile, which means the company will make more profit</li> <li>• Better return on capital employed, which will keep investors happy</li> <li>• Lower overhead percentage, which will make the company more competitive</li> <li>• Fuller use of its coach capacity, which represents better use of resources</li> </ul> <p><b>Arguments in favour of long trips:</b></p> <p>Long trips provide:</p> <ul style="list-style-type: none"> <li>• Higher gross profit percentage, which makes it easier to cover operating expenses</li> <li>• Higher net profit percentage, which means a greater proportion of revenue is potentially available for distribution to the shareholders</li> <li>• Lower fuel costs, which will improve profitability</li> <li>• Lower driver costs per mile, which will make the company more competitive</li> </ul> <p>Candidates should draw together/value their arguments to provide a reasoned judgement/decision.</p> <p>Accept any reasonable responses.</p>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	Question not attempted or response completely irrelevant or inaccurate
<b>Level 1</b>	1-3	Displays limited application of accounting theories or concepts in an appropriate context. A largely descriptive approach with unsupported or generalised examples, which are not related to the question scenario. Factors to support a logical chain of reasoning are not present or are not examined methodically. A supported conclusion is not present or the conclusion presented is not supported by evidence drawn from the question scenario.
<b>Level 2</b>	4-7	Displays application of accounting theories or concepts in an appropriate and relevant context. A largely descriptive approach with examples drawn from the question scenario. Factors to support a chain of reasoning are identified and supported by evidence drawn from the question scenario but are not examined methodically and the chain of reasoning presented is not sufficiently well developed or balanced to support a robust supported conclusion.
<b>Level 3</b>	8-12	Displays an understanding of accounting theories or concepts, which are applied in a relevant context. Displays the ability to link knowledge and understanding using relevant examples and inferences drawn from the question scenario. Displays an understanding of the essential themes present in the question scenario broken down into their constituent parts in order to present a logical and coherent chain of reasoning. Careful consideration is given to all relevant factors drawn from the question scenario with additional evidence drawn from relevant theory in order to present a reasoned and logically robust conclusion.

Question	Answer (AO1) 2, (AO3) 2	Mark
4(c)	<p><b>1 mark for stating each non-financial performance indicator, and 1 mark for developing each non-financial performance indicator, up to 4 marks, e.g.</b></p> <p>Number of complaints/frequency of repeat custom/favourable publicity (1) allows the company to determine passenger satisfaction, which may lead to an increase in passenger numbers (1)</p> <p>Whether services run on time/frequency of breakdowns/ other vehicle-related problems (1) improves the quality of service to the passenger and therefore leads to an improvement in the company's reputation (1)</p> <p>Accept any reasonable responses.</p>	(4)

Question	Answer (AO2) 3, (AO4) 1	Mark
5(a)	<p><b>Award 1 mark each for calculation of material quantity, direct labour hours and machine hours, up to 3 marks.</b></p> <ul style="list-style-type: none"> <li>• Award 1 mark for calculating material quantity, e.g.  <math>\\$67\,800</math> (total material costs for A, B and C)  <math>/\\$6.00</math> per kg (material cost per kg)  <math>= 11\,300</math> kg (12 000 kg available – therefore not limiting factor)</li> <li>• Award 1 mark for calculating direct labour hours, e.g.  <math>\\$30\,400</math> (total direct labour costs for A, B and C)  <math>/\\$8.00</math> per hour (wage rate for direct labour)  <math>= 3\,800</math> direct labour hours (4 250 direct labour hours available – therefore not limiting factor)</li> <li>• Award 1 mark for calculating number of machine hours, e.g.            (Units sold for A x machine hours per unit) + (units sold for B x machine hours per unit) + (units sold for C x machine hours per unit)  <math>= (0.03 \times 2\,000) + (0.04 \times 5\,000) + (0.06 \times 3\,000) = 440</math></li> </ul> <p><b>Award 1 mark for recognising limiting factor, e.g.</b></p> <p>There are only 375 machine hours available and that this is the only limiting factor out of the three inputs.</p> <p>Accept any reasonable responses.</p>	(4)

Question	Answer (AO2) 8, (AO4) 2	Mark																								
5(b)	<p><b>Award 1 mark each for calculating the variable costs, total contribution, contribution per unit and contribution per machine hour, up to 4 marks.</b></p> <ul style="list-style-type: none"> <li>Award 1 mark for calculating the variable costs for A, B and C, e.g.</li> </ul> <table border="1" data-bbox="411 488 1286 692"> <tr> <td>A</td> <td>\$9 000 (material cost) + \$4 000 (direct labour cost) + \$2 100 (variable overheads) = \$15 100</td> </tr> <tr> <td>B</td> <td>\$50 250</td> </tr> <tr> <td>C</td> <td>\$41 200</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for calculating the total contribution for A, B and C, e.g.</li> </ul> <table border="1" data-bbox="411 824 1286 1008"> <tr> <td>A</td> <td>\$27 900 (revenue) - \$15 100 (variable costs) = 12 800 (apply of rule)</td> </tr> <tr> <td>B</td> <td>\$29 500 (apply of rule)</td> </tr> <tr> <td>C</td> <td>\$18 650 (apply of rule)</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for contribution per unit for A, B and C</li> </ul> <table border="1" data-bbox="411 1108 1286 1285"> <tr> <td>A</td> <td>\$12 800 (total contribution) /2 000 (no. of units) = \$6.40 (apply of rule)</td> </tr> <tr> <td>B</td> <td>\$5.90 (apply of rule)</td> </tr> <tr> <td>C</td> <td>\$6.22 (apply of rule)</td> </tr> </table> <ul style="list-style-type: none"> <li>Award 1 mark for contribution per machine hour for A, B and C</li> </ul> <table border="1" data-bbox="411 1417 1286 1597"> <tr> <td>A</td> <td>\$6.40 (contribution per machine hour) / 0.03 (machine hours per unit) = \$213.33 (accept 213) (apply of rule)</td> </tr> <tr> <td>B</td> <td>= \$147.50 (accept 148) (apply of rule)</td> </tr> <tr> <td>C</td> <td>= \$103.61 (accept 104) (apply of rule)</td> </tr> </table>	A	\$9 000 (material cost) + \$4 000 (direct labour cost) + \$2 100 (variable overheads) = \$15 100	B	\$50 250	C	\$41 200	A	\$27 900 (revenue) - \$15 100 (variable costs) = 12 800 (apply of rule)	B	\$29 500 (apply of rule)	C	\$18 650 (apply of rule)	A	\$12 800 (total contribution) /2 000 (no. of units) = \$6.40 (apply of rule)	B	\$5.90 (apply of rule)	C	\$6.22 (apply of rule)	A	\$6.40 (contribution per machine hour) / 0.03 (machine hours per unit) = \$213.33 (accept 213) (apply of rule)	B	= \$147.50 (accept 148) (apply of rule)	C	= \$103.61 (accept 104) (apply of rule)	
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Question		Mark																												
<b>5(b)</b> <b>cont'd</b>	<p><b>Award 1 mark for the ranking of each product.</b></p> <ul style="list-style-type: none"> <li>Award 1 mark for the correct ranking of the three products in terms of contribution per machine hour, e.g.</li> </ul> <table border="1" data-bbox="411 421 1286 640"> <thead> <tr> <th>Product</th> <th>Contribution per machine hour</th> <th>Ranking</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>\$213.33/214</td> <td>1st</td> </tr> <tr> <td>B</td> <td>\$147.50/148</td> <td>2nd</td> </tr> <tr> <td>C</td> <td>\$103.61/104</td> <td>3rd</td> </tr> </tbody> </table> <p>Apply of rule.</p> <p><b>Award 1 mark each for calculating the number of machine hours for each product that would maximise profit, up to 3 marks.</b></p> <table border="1" data-bbox="411 869 1286 1200"> <thead> <tr> <th>Product</th> <th>Machine hours</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2000 (no. of units) x 0.03 (machine hours per unit) = 60 machine hours (apply of rule) (1)</td> </tr> <tr> <td>B</td> <td>5000 units x 0.04 = 200 machine hours (apply of rule) (1)</td> </tr> <tr> <td>C</td> <td>375 (max machine hours) - (200 (Product A machine hours) + 60 (Product B machine hours) = 115 machine hours (apply of rule) (1)</td> </tr> </tbody> </table> <p><b>Award 1 mark for calculating the number of units for Product C.</b></p> <p>115 (machine hours) /0.06 (machine hours per unit) = 1916</p> <p><b>Award 1 mark for identifying the product mix that would maximise profit.</b></p> <table border="1" data-bbox="411 1554 1281 1697"> <thead> <tr> <th>Product</th> <th>No. of units</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2000</td> </tr> <tr> <td>B</td> <td>5000</td> </tr> <tr> <td>C</td> <td>1916</td> </tr> </tbody> </table> <p>Accept any reasonable responses.</p>	Product	Contribution per machine hour	Ranking	A	\$213.33/214	1st	B	\$147.50/148	2nd	C	\$103.61/104	3rd	Product	Machine hours	A	2000 (no. of units) x 0.03 (machine hours per unit) = 60 machine hours (apply of rule) (1)	B	5000 units x 0.04 = 200 machine hours (apply of rule) (1)	C	375 (max machine hours) - (200 (Product A machine hours) + 60 (Product B machine hours) = 115 machine hours (apply of rule) (1)	Product	No. of units	A	2000	B	5000	C	1916	<b>(10)</b>
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Question	Indicative content (A03) 4, (A04) 4, (A05) 4
5(c)	<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• It can enable the company to identify which activity makes the best or most profitable use of a limited resource and this will enable the company to maximise its contribution and profit</li> <li>• Use of contribution to judge an activity is better than a profit figure that might be distorted by fixed costs, some of which (like fixed overheads) might be arbitrarily apportioned. This will enable the company to make better decisions about product mix</li> <li>• Contribution per unit can lead to distortions if units of different products consume different amounts of scarce resources, so this will enable the company to identify which product really makes best use of the resource</li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• The figures being used might change – demand, selling price or costs might be greater or less than expected. This will mean that any decision made regarding product mix may no longer be the most profitable</li> <li>• The approach is highly dependent on the accuracy of the figures being used – demand, selling price or costs might be greater or less than expected. This may lead to the company producing less of the most profitable product</li> <li>• This approach fails to consider that customers may want the whole range of products and will stop buying all of them if one is withdrawn</li> <li>• This approach does not consider the possibility that the products are complementary and withdrawing/limiting one will render the others useless</li> <li>• This approach will need to be adapted if there are contractual obligations. The company may not be able to legally withdraw a product</li> <li>• This approach does not consider issues like multiple selling prices, which might make it difficult for the company to identify which product really is the most profitable</li> </ul> <p>Candidates should draw together/value their arguments to provide a reasoned judgement/decision.</p>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	Question not attempted or response completely irrelevant or inaccurate
<b>Level 1</b>	1-3	Displays limited application of accounting theories or concepts in an appropriate context. A largely descriptive approach with unsupported or generalised examples, which are not related to the question scenario. Factors to support a logical chain of reasoning are not present or are not examined methodically. A supported conclusion is not present or the conclusion presented is not supported by evidence drawn from the question scenario.
<b>Level 2</b>	4-7	Displays application of accounting theories or concepts in an appropriate and relevant context. A largely descriptive approach with examples drawn from the question scenario. Factors to support a chain of reasoning are identified and supported by evidence drawn from the question scenario but are not examined methodically and the chain of reasoning presented is not sufficiently well developed or balanced to support a robust supported conclusion.
<b>Level 3</b>	8-12	Displays an understanding of accounting theories or concepts, which are applied in a relevant context. Displays the ability to link knowledge and understanding using relevant examples and inferences drawn from the question scenario. Displays an understanding of the essential themes present in the question scenario broken down into their constituent parts in order to present a logical and coherent chain of reasoning. Careful consideration is given to all relevant factors drawn from the question scenario with additional evidence drawn from relevant theory in order to present a reasoned and logically robust conclusion.

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