



# Cambridge International AS & A Level

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**BUSINESS**

**9609/32**

Paper 3 Case Study

**October/November 2023**

MARK SCHEME

Maximum Mark: 100

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**Published**

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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This document consists of **24** printed pages.

**PUBLISHED****Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**PUBLISHED****Social Science-Specific Marking Principles  
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require  $n$  reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

**2 Presentation of mark scheme:**

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

**PUBLISHED****3 Calculation questions:**

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

**4 Annotation:**

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

**Guidance on using levels-based marking**

Marking of work should be positive, rewarding achievement where possible, but clearly differentiating across the whole range of marks, where appropriate.

The examiner should look at the work and then make a judgement about which level statement is the best fit. In practice, work does not always match one level statement precisely so a judgement may need to be made between two or more level statements.

Once a best-fit level statement has been identified, use the following guidance to decide on a specific mark:

- If the candidate's work **convincingly** meets the level statement, award the highest mark.
- If the candidate's work **adequately** meets the level statement, award the most appropriate mark in the middle of the range.
- If the candidate's work **just** meets the level statement, award the lowest mark.
- L1, L2 etc. must be clearly annotated on the response at the point where the level is achieved.

**Assessment objectives****AO1 Knowledge and understanding**

Demonstrate knowledge and understanding of business concepts, terms and theories.

**AO2 Application**

Apply knowledge and understanding of business concepts, terms and theories to problems and issues in a variety of familiar and unfamiliar business situations and contexts.

**AO3 Analysis**

Analyse business problems, issues and situations by:

- using appropriate methods and techniques to make sense of qualitative and quantitative business information
- searching for causes, impact and consequences
- distinguishing between factual evidence and opinion or value judgement
- drawing valid inferences and making valid generalisations.

**AO4 Evaluation**

Evaluate evidence in order to make reasoned judgements, present substantiated conclusions and, where appropriate, make recommendations for action and implementation.

Question	Answer				Marks
1	Refer to lines 69–70. Analyse how the <u>two</u> changes in the economic environment will impact CQ.				8
Level	AO1 Knowledge and understanding 2 marks	AO2 Application 2 marks	AO3 Analysis 4 marks		
2			<b>3–4 marks</b> <b>Developed analysis</b> <ul style="list-style-type: none"> <li>Developed analysis that identifies connections between causes, impacts and/or consequences of <b>two</b> points.</li> <li>Developed analysis that identifies connections between causes, impacts and/or consequences of <b>one</b> point.</li> </ul>		
1	<b>1–2 marks</b> <ul style="list-style-type: none"> <li>Knowledge of <b>two</b> relevant points is used to answer the question.</li> <li>Knowledge of <b>one</b> relevant point is used to answer the question.</li> </ul>	<b>1–2 marks</b> <ul style="list-style-type: none"> <li>Application of <b>two</b> relevant points to a business context.</li> <li>Application of <b>one</b> relevant point to a business context.</li> </ul>	<b>1–2 marks</b> <b>Limited analysis</b> <ul style="list-style-type: none"> <li>Limited analysis that identifies connections between causes, impacts and/or consequences of <b>two</b> points.</li> <li>Limited analysis that identifies connections between causes, impacts and/or consequences of <b>one</b> point.</li> </ul>		
0	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.		
<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>If more than two impacts are referred to, reward the best two.</li> </ul> <p>All annotation (<b>K</b> <b>APP</b> <b>AN</b> <b>L2</b>) should be in the left margin.</p>					

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Question	Answer	Marks
1	<p><b>Indicative content</b> Responses may include:</p> <p><b>AO1 Knowledge and understanding</b> Definition of relevant terms from lines 69–70 (max K1 mark):</p> <ul style="list-style-type: none"> <li>• Depreciation of exchange rate – a fall in the value of one currency in terms of another.</li> <li>• Inflation – an increase in the general price level.</li> <li>• Taxation includes income and corporation tax and indirect taxes such as VAT. Changing levels of taxation is an element of fiscal policy.</li> </ul> <p>Knowledge of impact of changes in the economic environment on CQ:</p> <ul style="list-style-type: none"> <li>• Decreased demand for goods (increase in taxation).</li> <li>• Higher costs (inflation and/or depreciation of exchange rate).</li> <li>• Increased export earnings (depreciation of the exchange rate).</li> </ul> <p><b>AO2 Application</b> <i>Max one [APP] for application for the first element and max one [APP] for application for the second element.</i></p> <ul style="list-style-type: none"> <li>• Linking ER depreciation to imports of bamboo from the US or exports of shoes to the US.</li> <li>• CQ objective is to increase sales to US.</li> <li>• Linking taxation to demand for shoes and/or CQ's premium prices.</li> <li>• Linking inflation to wage demands of workers at factory in country P.</li> <li>• Linking taxation to CQ's proposed investment in sustainability.</li> </ul> <p><b>AO3 Analysis</b> <i>Limited analysis [AN] – candidate shows one link in the chain of analysis.</i> <i>Developed analysis [L2 AN] – candidate shows two or more links in the chain of analysis.</i></p> <ul style="list-style-type: none"> <li>• Depreciation will make imports of bamboo from the US more expensive therefore increasing CQ costs [AN] and increasing price or reducing gross profit margin. [L2 AN]</li> <li>• Depreciation will reduce price of CQ shoes to US importers and therefore result in an increase in sales volume (and value) [AN] helping to meet CQ objective of growth. [L2 AN]</li> </ul>	

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Question	Answer	Marks
1	<ul style="list-style-type: none"> <li>• Inflation may result in an increase in wage demands from workers at the factory in country P increasing costs of CQ <b>AN</b> and therefore reducing profit margins. <b>L2 AN</b></li> <li>• An increase in income tax will reduce consumers' disposable income leading to a decrease in demand for goods and therefore a decrease in sales revenue <b>AN</b> resulting in a decrease in profits. <b>L2 AN</b></li> <li>• Unique nature of CQ's product may mean that changes in price and income may have only a limited impact on sales and profit. <b>AN</b></li> <li>• Increase in corporation tax will reduce retained profit and could therefore result in delay in CQ's plans such as the investment in sustainability <b>AN</b> limiting future profit of the company. <b>L2 AN</b></li> </ul> <p>Accept all valid responses.</p>	

Question	Answer			Marks
2	<b>Analyse how <u>two</u> qualities of leadership demonstrated by Frederico have contributed to CQ's success.</b>			<b>8</b>
<b>Level</b>	<b>AO1 Knowledge and understanding 2 marks</b>	<b>AO2 Application 2 marks</b>	<b>AO3 Analysis 4 marks</b>	
<b>2</b>			<b>3–4 marks Developed analysis</b> <ul style="list-style-type: none"> <li>• Developed analysis that identifies connections between causes, impacts and/or consequences of <b>two</b> points.</li> <li>• Developed analysis that identifies connections between causes, impacts and/or consequences of <b>one</b> point.</li> </ul>	
<b>1</b>	<b>1–2 marks</b> <ul style="list-style-type: none"> <li>• Knowledge of <b>two</b> relevant points is used to answer the question.</li> <li>• Knowledge of <b>one</b> relevant point is used to answer the question.</li> </ul>	<b>1–2 marks</b> <ul style="list-style-type: none"> <li>• Application of <b>two</b> relevant points to a business context.</li> <li>• Application of <b>one</b> relevant point to a business context.</li> </ul>	<b>1–2 marks Limited analysis</b> <ul style="list-style-type: none"> <li>• Limited analysis that identifies connections between causes, impacts and/or consequences of <b>two</b> points.</li> <li>• Limited analysis that identifies connections between causes, impacts and/or consequences of <b>one</b> point.</li> </ul>	
<b>0</b>	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	
<b>Note:</b> <ul style="list-style-type: none"> <li>• If more than two leadership qualities are referred to, reward the best two.</li> </ul>				

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Question	Answer	Marks
2	<p><b>Indicative content</b> Responses may include:</p> <p><b>AO1 Knowledge and understanding</b> Definition of relevant terms (max K1 mark):</p> <ul style="list-style-type: none"> <li>• Leadership is the art of motivating people towards achieving a common goal.</li> <li>• Theories of leadership include trait, behavioural and contingency theory.</li> </ul> <p>Knowledge of leadership qualities (max K2 marks):</p> <ul style="list-style-type: none"> <li>• Leadership qualities include: <ul style="list-style-type: none"> <li>– Desire to succeed</li> <li>– Risk taker</li> <li>– Confidence, self-belief</li> <li>– Innovative, creative</li> <li>– Decisive – decision making skills</li> <li>– Being inspirational</li> <li>– Honesty and integrity</li> <li>– Being a good communicator</li> <li>– Empathy and emotional intelligence</li> <li>– Leadership styles, such as democratic</li> <li>– Ability to delegate</li> </ul> </li> </ul> <p><b>AO2 Application</b> Max one <b>APP</b> for application for the first element and max one <b>APP</b> for application for the second element.</p> <ul style="list-style-type: none"> <li>• Qualities illustrated in the case: <ul style="list-style-type: none"> <li>– Drive and determination, self-belief – Frederico mortgaged his house to start the business and gave up his role as an executive.</li> <li>– He communicates effectively and shows charisma – persuaded a venture capital company to invest in his idea and persuaded unions to accept changes in the factory including the loss of jobs.</li> <li>– Innovative/creative. – it was Frederico’s idea to produce sustainable shoes from bamboo. He spotted a gap in the market.</li> </ul> </li> </ul>	

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Question	Answer	Marks
2	<p><b>AO3 Analysis</b></p> <p>Limited analysis <b>AN</b> – candidate shows one link in the chain of analysis.</p> <p>Developed analysis <b>L2AN</b> – candidate shows two or more links in the chain of analysis.</p> <ul style="list-style-type: none"> <li>Frederico demonstrates self-belief, being willing to give up his executive role and mortgage his house to set up the business. This has enabled the business to finance the investment in product development to bring Frederico’s idea to market. <b>AN</b></li> <li>Creativity and innovation have given the business a competitive edge <b>AN</b> by developing a product that is unique and meets customer demands for a shoe that is lightweight and comfortable to wear in a hot climate. This increases sales. <b>L2AN</b></li> <li>Frederico spotted a gap in the market which enables CQ to face less direct competition <b>AN</b> and gain control over price to charge a premium price and make more profit. <b>L2AN</b></li> <li>Frederico’s communication skills have encouraged the unions and workers to accept change which will result in job losses. His vision for the business may inspire loyalty. This negotiation will help CQ solve its operational problems and reduce costs <b>AN</b> resulting in a higher profit margin. <b>L2AN</b></li> </ul> <p>Accept all valid responses.</p>	

Question	Answer	Marks
3(a)	<p><b>Refer to line 35. Calculate CQ’s capacity utilisation</b></p> <p>Responses may include:</p> <p>CU = 120 000 / 160 000 X 100 = 75% (1)  Accept answer without % sign, 75 (1)</p>	1

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Question	Answer	Marks
3(b)	<p><b>Refer to Appendix 1. Calculate CQ's rate of inventory turnover.</b></p> <p>Responses may include:</p> <p>Inventory turnover = cost of sales / average inventory and/or            Cost of sales = revenue – gross profit (1 mark if no relevant calculation)            Cost of sales = 1.2 – 0.8 = \$0.4m (1)            Inventory turnover = 0.4 / 0.13 (2)            Inventory turnover = 3.077 OR 3.08 OR 3.1 OR 3 times (3)            Incorrect unit for final answer e.g. \$3.077 OR 3.077% OR 3.077 days (2)</p> <p>If expressed in days then:            Inventory turnover = average inventory / cost of sales X 365 (1 mark if no relevant calculation)            Inventory turnover = 0.13 / 0.4 X 365 (2)            = 118.6 days OR 119 days (3)            If correct equation stated but then calculation shows 1.2 / 0.13 = 9.23 (2)</p> <p>Accept all valid responses.</p>	<b>3</b>

Question	Answer				Marks	
3(c)	<b>Evaluate whether introducing lean production techniques will be sufficient to achieve CQ's operational objectives.</b>				<b>12</b>	
	Level	AO1 Knowledge and understanding 2 marks	AO2 Application 2 marks	AO3 Analysis 2 marks		AO4 Evaluation 6 marks
	3					<b>5–6 marks</b> <b>Developed evaluation in context</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made in the business context.</li> <li>• Developed evaluative comments which balance some key arguments in the business context.</li> </ul>
	2	<b>2 marks</b> <b>Developed knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>2 marks</b> <b>Developed application</b> of relevant point(s) to the business context.	<b>2 marks</b> <b>Developed analysis</b> that identifies connections between causes, impacts and/or consequences.		<b>3–4 marks</b> <b>Developed evaluation</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made.</li> <li>• Developed evaluative comments which balance some key arguments.</li> </ul>
	1	<b>1 mark</b> <b>Limited knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>1 mark</b> <b>Limited application</b> of relevant point(s) to the business context.	<b>1 mark</b> <b>Limited analysis</b> that identifies connections between causes, impacts and/or consequences.		<b>1–2 marks</b> <b>Limited evaluation</b> <ul style="list-style-type: none"> <li>• A judgement/conclusion is made with limited supporting comment/evidence.</li> <li>• An attempt is made to balance the arguments.</li> </ul>
0	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.		

Question	Answer	Marks
3(c)	<p><b>Indicative content</b> Responses may include:</p> <p><b>AO1 Knowledge and understanding</b> <i>Limited knowledge [K] will be demonstrated through knowledge of lean production <u>or</u> knowledge of impact on operational objectives.</i> <i>Developed knowledge [K] + [K] will be demonstrated through knowledge of lean production <u>and</u> knowledge of impact on operational objectives.</i></p> <ul style="list-style-type: none"> <li>• Definition of lean production: reducing all forms of waste.</li> <li>• Lean production techniques: <ul style="list-style-type: none"> <li>– TQM</li> <li>– Quality circles</li> <li>– Cell production</li> <li>– JIT</li> <li>– Kaizen</li> <li>– Simultaneous engineering.</li> </ul> </li> <li>• Need for capital investment such as ERP or flexible machinery.</li> <li>• Knowledge of relevant ratios such as inventory turnover.</li> </ul> <p><b>AO2 Application</b> <i>Limited application, [APP] applies knowledge to CQ once.</i> <i>Developed application, [APP] + [APP] applies knowledge to CQ twice.</i></p> <ul style="list-style-type: none"> <li>• Inventory turnover of 3.08 means that inventory is currently kept for 119 days on average. Objective is to increase inventory turnover to 5 times.</li> <li>• Need to hold bamboo material for production and finished shoes to meet fluctuations in demand.</li> <li>• 5% of output is defective – in six months = 6000 units. Objective is to cut this by 50%.</li> <li>• CQ has only just taken over the factory. Objective to increase production to full capacity within eight months and reduce workforce size.</li> <li>• The shoe manufacturer had been unprofitable when CQ took it over.</li> <li>• Unions have agreed to changes in working practices.</li> </ul>	

Question	Answer	Marks
3(c)	<p><b>AO3 Analysis</b></p> <p><i>Limited analysis</i> <b>AN</b> – candidate shows one link in the chain of analysis.  <i>Developed analysis</i> <b>L2AN</b> – candidate shows two or more links in the chain of analysis.</p> <ul style="list-style-type: none"> <li>• By reducing all forms of waste CQ will be more efficient, and this will reduce unit cost of production <b>AN</b> making CQ more competitive. <b>L2AN</b></li> <li>• Lean production includes TQM and quality circles. Giving workers responsibility for quality may increase motivation resulting in a reduction in defective output, <b>AN</b> improve quality and productivity, making CQ more competitive. <b>L2AN</b></li> <li>• Lean production includes JIT manufacturing. Aim to hold zero inventory which will increase inventory turnover <b>AN</b> resulting in less inventory holding costs. <b>L2AN</b></li> <li>• Training of employees will be required thus increasing costs of CQ <b>AN</b> but this could increase motivation of employees resulting in higher productivity. <b>L2AN</b></li> <li>• Lean production aims to use less of everything and therefore may enable production to be maintained whilst reducing the size of the labour force <b>AN</b> and therefore reduce unit costs. <b>L2AN</b></li> <li>• Lean production by building relationship with suppliers could eliminate the supply chain failures <b>AN</b> thus reducing the high levels of inventory previously needed. <b>L2AN</b></li> <li>• Use of JIT may result in CQ running out of inventory and therefore lead to a loss of sales. <b>AN</b></li> </ul> <p><b>AO4 Evaluation</b></p> <p><i>Limited evaluation</i> <b>EVAL</b> – limited supported judgement and/or a weak attempt at evaluative comment.  <i>Developed evaluation</i> <b>L2EVAL</b> – supported judgement and/or reasonable evaluative comment.  <i>Developed evaluation in context</i> <b>L3EVAL</b> – supported judgement in context and/or reasonable evaluative comment in context.</p> <ul style="list-style-type: none"> <li>• Elements that the evaluation/judgement might depend on: <ul style="list-style-type: none"> <li>– Effectiveness will depend on supplier relationships and reliability of receiving supplies when needed. Supply chain with bamboo coming from the US may make JIT production difficult to implement due to long lead times.</li> <li>– Can CQ predict demand accurately? JIT risks lost customers if demand is underestimated.</li> <li>– Is inventory turnover high or low compared to competitors?</li> <li>– Was part of the problem that workers are unfamiliar with the production methods for the bamboo shoes after the takeover?</li> <li>– Cost of the investment and current financial situation of CQ such as its high gearing.</li> </ul> </li> </ul>	

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<b>Question</b>	<b>Answer</b>	<b>Marks</b>
3(c)	<ul style="list-style-type: none"><li>• Significance of other factors that may also impact success of LP:<ul style="list-style-type: none"><li>– Existing factory, workers may have an ingrained culture to overcome.</li></ul></li><li>• Evaluation of alternative approaches to achieving objectives such as investment in capital equipment or increased marketing expenditure to increase sales and inventory turnover.</li><li>• Supported overall judgement about introduction of LP.</li> <li>• Accept all valid responses.</li></ul>	

Question	Answer	Marks																												
4(a)	<p><b>Refer to lines 48–49 and Table 1.1. Calculate the net present value (NPV).</b></p> <p>Responses may include:</p> <table border="1" data-bbox="714 352 1561 842"> <thead> <tr> <th></th> <th>Net savings (\$)</th> <th>Discount factor @ 6%</th> <th>Discounted cash flow</th> </tr> </thead> <tbody> <tr> <td>Year 1</td> <td>150 000</td> <td>0.94</td> <td>141 000</td> </tr> <tr> <td>Year 2</td> <td>230 000</td> <td>0.89</td> <td>204 700</td> </tr> <tr> <td>Year 3</td> <td>230 000</td> <td>0.84</td> <td>193 200</td> </tr> <tr> <td>Year 4</td> <td>210 000</td> <td>0.79</td> <td>165 900</td> </tr> <tr> <td>Year 5</td> <td>200 000</td> <td>0.75</td> <td>150 000</td> </tr> <tr> <td></td> <td></td> <td></td> <td>854 800</td> </tr> </tbody> </table> <p>NPV = total discounted cash flows – capital cost (1 mark if no correct calculations)                      At least one correct discounted cashflow identified for Years 1–5 (1)                      Correct calculation of all discounted cash flows for years 1–5 and/or cumulative discounted cash flow of \$854 800 for years 1–5 (2)                      NPV = 0.8548 – 1 (3)                      NPV = (\$145 200) OR (145 200) (4)                      If answer not shown as negative i.e. \$145 200 (3)                      Allow rounding of discounted cash flows. Cumulative discounted cash flows 855 000 (2) and NPV of (145 000) (4)</p>		Net savings (\$)	Discount factor @ 6%	Discounted cash flow	Year 1	150 000	0.94	141 000	Year 2	230 000	0.89	204 700	Year 3	230 000	0.84	193 200	Year 4	210 000	0.79	165 900	Year 5	200 000	0.75	150 000				854 800	4
	Net savings (\$)	Discount factor @ 6%	Discounted cash flow																											
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Year 3	230 000	0.84	193 200																											
Year 4	210 000	0.79	165 900																											
Year 5	200 000	0.75	150 000																											
			854 800																											

Question	Answer				Marks
4(b)	<b>Evaluate whether CQ should invest in measures to improve sustainability.</b>				<b>12</b>
	<b>AO1 Knowledge and understanding 2 marks</b>	<b>AO2 Application 2 marks</b>	<b>AO3 Analysis 2 marks</b>	<b>AO4 Evaluation 6 marks</b>	
<b>3</b>				<b>5–6 marks</b> <b>Developed evaluation in context</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made in the business context.</li> <li>• Developed evaluative comments which balance some key arguments in the business context.</li> </ul>	
<b>2</b>	<b>2 marks</b> <b>Developed knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>2 marks</b> <b>Developed application</b> of relevant point(s) to the business context.	<b>2 marks</b> <b>Developed analysis</b> that identifies connections between causes, impacts and/or consequences.	<b>3–4 marks</b> <b>Developed evaluation</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made.</li> <li>• Developed evaluative comments which balance some key arguments.</li> </ul>	
<b>1</b>	<b>1 mark</b> <b>Limited knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>1 mark</b> <b>Limited application</b> of relevant point(s) to the business context.	<b>1 mark</b> <b>Limited analysis</b> that identifies connections between causes, impacts and/or consequences.	<b>1–2 marks</b> <b>Limited evaluation</b> <ul style="list-style-type: none"> <li>• A judgement/conclusion is made with limited supporting comment/evidence.</li> <li>• An attempt is made to balance the arguments.</li> </ul>	
<b>0</b>	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	

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Question	Answer	Marks
4(b)	<p><b>Indicative content</b> Responses may include:</p> <p><b>OFR from 4(a)</b></p> <p><b>AO1 Knowledge and understanding</b> <i>Limited knowledge [K] will be demonstrated through knowledge of sustainability <u>or</u> knowledge of factors in the decision. Developed knowledge [K] + [K] will be demonstrated through knowledge of sustainability <u>and</u> knowledge of factors in the decision.</i></p> <ul style="list-style-type: none"> <li>• Understanding of sustainability – business operations that can be maintained in the long term, for example, by protecting the environment and not damaging the quality of life for future generations.</li> <li>• Understanding of investment appraisal techniques NPV, ARR and Payback.</li> <li>• Other factors in the decision: <ul style="list-style-type: none"> <li>– Cost</li> <li>– Availability of finance</li> <li>– Impact on workers/consumers</li> <li>– Preferences of owners</li> </ul> </li> </ul> <p><b>AO2 Application</b> <i>Limited application, [APP] applies knowledge to CQ once. Developed application, [APP] + [APP] applies knowledge to CQ twice.</i></p> <ul style="list-style-type: none"> <li>• NPV is negative. Discounted cash flows do not cover the capital cost.</li> <li>• Payback is 4 years 10.8 months.</li> <li>• Link between investment and mission statement regarding carbon neutrality.</li> <li>• Investment will support CQ's desire to reduce carbon emissions.</li> <li>• Gearing of CQ is high – <math>3 / 4.2 \times 100 = 71.4\%</math>.</li> <li>• Preference of Frederico as owner.</li> <li>• \$1m required.</li> </ul>	

Question	Answer	Marks
4(b)	<p><b>AO3 Analysis</b></p> <p><i>Limited analysis</i> <b>AN</b> – candidate shows one link in the chain of analysis.  <i>Developed analysis</i> <b>L2 AN</b> – candidate shows two or more links in the chain of analysis.</p> <ul style="list-style-type: none"> <li>NPV is negative suggesting that the investment is not worth considering as will be loss making in real terms over a five-year period. <b>AN</b></li> <li>Investment would boost CQ’s environmental image which could result in higher sales <b>AN</b> which would increase market share. <b>L2 AN</b></li> <li>Improved environmental image would support maintenance of premium prices <b>AN</b> resulting in higher profits. <b>L2 AN</b></li> <li>Investment would reduce CQ’s reliance on external supplier of energy reducing the volatility of energy costs <b>AN</b> and therefore make planning easier. <b>L2 AN</b></li> <li>High gearing may make raising finance more difficult from banking sector. <b>AN</b> This is a significant cost and could impact liquidity of CQ negatively placing a strain on its finances. <b>L2 AN</b></li> </ul> <p><b>AO4 Evaluation</b></p> <p><i>Limited evaluation</i> <b>EVAL</b> – limited supported judgement and/or a weak attempt at evaluative comment.  <i>Developed evaluation</i> <b>L2 EVAL</b> – supported judgement and/or reasonable evaluative comment.  <i>Developed evaluation in context</i> <b>L3 EVAL</b> – supported judgement in context and/or reasonable evaluative comment in context.</p> <ul style="list-style-type: none"> <li>Supported judgement as to decision.</li> <li>Weighing of factors.</li> <li>Most important factor in decision.</li> <li>Cost savings are estimates made by the Finance Manager. Can these figures be trusted?</li> <li>The data is only on cost savings and may not account for any positive impact of the investment on sales and protection of premium price.</li> <li>Is profit more important to CQ than fulfilling its mission statement?</li> <li>The data is only for five years. It is likely that the data is incomplete as solar panels and insulation should bring benefits over a much longer time period.</li> <li>Quantitative vs qualitative factors – NPV suggests that the investment is unprofitable but consistency with mission statement may be more important in long term.</li> </ul> <p>Accept all valid responses.</p>	

Question	Answer				Marks
5	<b>Evaluate the importance to CQ's future success of new product development.</b>				12
	<b>AO1 Knowledge and understanding</b> 2 marks	<b>AO2 Application</b> 2 marks	<b>AO3 Analysis</b> 2 marks	<b>AO4 Evaluation</b> 6 marks	
3				<b>5–6 marks</b> <b>Developed evaluation in context</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made in the business context.</li> <li>• Developed evaluative comments which balance some key arguments in the business context.</li> </ul>	
2	<b>2 marks</b> <b>Developed knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>2 marks</b> <b>Developed application</b> of relevant point(s) to the business context.	<b>2 marks</b> <b>Developed analysis</b> that identifies connections between causes, impacts and/or consequences.	<b>3–4 marks</b> <b>Developed evaluation</b> <ul style="list-style-type: none"> <li>• A developed judgement/conclusion is made.</li> <li>• Developed evaluative comments which balance some key arguments.</li> </ul>	
1	<b>1 mark</b> <b>Limited knowledge</b> of relevant key term(s) and/or factor(s) is used to answer the question.	<b>1 mark</b> <b>Limited application</b> of relevant point(s) to the business context.	<b>1 mark</b> <b>Limited analysis</b> that identifies connections between causes, impacts and/or consequences.	<b>1–2 marks</b> <b>Limited evaluation</b> <ul style="list-style-type: none"> <li>• A judgement/conclusion is made with limited supporting comment/evidence.</li> <li>• An attempt is made to balance the arguments.</li> </ul>	
0	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	<b>0 marks</b> No creditable response.	

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Question	Answer	Marks
5	<p><b>Indicative content</b> Responses may include:</p> <p><b>AO1 Knowledge and understanding</b> <i>Limited knowledge [K] will be demonstrated through knowledge of NPD <u>or</u> knowledge of importance.</i> <i>Developed knowledge [K] + [K] will be demonstrated through knowledge of NPD <u>and</u> knowledge of importance.</i></p> <ul style="list-style-type: none"> <li>• New product development is the design, creation and marketing of new goods and services.</li> <li>• Research and development is the scientific research and technical development of new products and processes.</li> <li>• Benefits of new product development: <ul style="list-style-type: none"> <li>– Attract repeat purchase by offering a product that is new and better</li> <li>– Meet customer needs more effectively</li> <li>– Attract new customers</li> <li>– Gain a competitive advantage over competition</li> <li>– Product differentiation</li> <li>– Control over pricing</li> <li>– Refresh the brand</li> <li>– Spreading risk</li> </ul> </li> <li>• Disadvantages of NPD: <ul style="list-style-type: none"> <li>– Cost of product development</li> <li>– Need for market research</li> <li>– Risk of failure</li> <li>– Timescale</li> </ul> </li> </ul> <p><b>AO2 Application</b> <i>Limited application, [APP] applies knowledge to CQ once.</i> <i>Developed application, [APP] + [APP] applies knowledge to CQ twice.</i></p> <ul style="list-style-type: none"> <li>• Development of sustainable footwear which is comfortable.</li> <li>• Development of a product suitable for hot weather.</li> <li>• Link to mission statement.</li> <li>• Development of running shoe to challenge leading brands.</li> <li>• Improvements being made to products each year.</li> <li>• Reference to celebrity endorsement.</li> <li>• Process innovation involved in unique construction of the shoes.</li> </ul>	

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Question	Answer	Marks
5	<p><b>AO3 Analysis</b></p> <p>Limited analysis <b>AN</b> – candidate shows one link in the chain of analysis.</p> <p>Developed analysis <b>L2AN</b> – candidate shows two or more links in the chain of analysis.</p> <ul style="list-style-type: none"> <li>• Improvements in product will maintain consumer interest in CQ’s shoes and prevent the product becoming outdated. <b>AN</b> This will result in higher sales and potentially increased profit. <b>L2AN</b></li> <li>• Celebrity endorsement attracted by the sustainability of the shoe helped build sales initially. <b>AN</b></li> <li>• New product development can be expensive and is not guaranteed to be successful and therefore may constrain profits <b>AN</b> and result in solvency issues.</li> <li>• Product development may contribute to CQ’s image of high-quality and therefore support premium prices <b>AN</b> and give higher profit margins. <b>L2AN</b></li> </ul> <p><b>AO4 Evaluation</b></p> <p>Limited evaluation <b>EVAL</b> – limited supported judgement and/or a weak attempt at evaluative comment.</p> <p>Developed evaluation <b>L2EVAL</b> – supported judgement and/or reasonable evaluative comment.</p> <p>Developed evaluation in context <b>L3EVAL</b> – supported judgement in context and/or reasonable evaluative comment in context.</p> <ul style="list-style-type: none"> <li>• Without product development CQ will lose its competitive edge in the market. Products need to be continually improving to maintain consumer interest.</li> <li>• Fashions may change quickly in this industry and so it is important to constantly update products to satisfy consumers.</li> <li>• Product development was essential to initial success of CQ by producing a product that was different to that of the competition.</li> <li>• To challenge leading brands in the running shoe market may require significant product differentiation due to strength of brand image of existing firms.</li> <li>• Product development vs market development strategy for success.</li> <li>• Significance of current economic climate to the decision: <ul style="list-style-type: none"> <li>– Higher taxation may constrain finance available.</li> <li>– NPD could develop cheaper range to counteract the economic constraints faced (higher taxation and inflation).</li> </ul> </li> <li>• Other factors in success: <ul style="list-style-type: none"> <li>– Celebrity endorsement might be most important as marketing depended on social media initially. However, was this a direct result of CQ’s successful product development?</li> </ul> </li> </ul> <p>Accept all valid responses.</p>	