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CAMBRIDGE
International Education

Cambridge International AS & A Level

BUSINESS **9609/33**

Paper 3 Case Study **October/November 2025**

MARK SCHEME

Maximum Mark: 60

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 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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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 descriptions 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.

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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.

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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).

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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.

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Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standard isation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	For objective points that are correct.
	For objective points that are wrong.
TV	When the candidate has attempted something, but the mark/skill has not been awarded as the answer is not sufficiently clear.
Highlighter	To highlight a point or section of an answer that justifies the mark/annotation.
BOD	When the candidate has attempted something, and the mark/skill has been awarded.
SEEN	To show a page/section has been seen/read.
REP	The repetition of a previous point in a response **or** the candidate is copying the case study/data.
OFR	The own figure rule applies – acts as a mark/tick.
K	When AO1 has been awarded. The number of Ks should match the mark awarded.

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Annotation	Meaning
APP	When AO2 has been awarded. The number of APPs should match the mark awarded.
AN	When AO3 at Level 1 has been awarded.
L2 AN	When AO3 at Level 2 has been awarded.
EVAL	When AO4 at Level 1 has been awarded.
L2 EVAL	When AO4 at Level 2 has been awarded.
L2	When AO3 or AO4 has been awarded at Level 2.
L3	When AO4 has been awarded at Level 3.

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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.

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1</td><td>
Analyse <u>two</u> advantages to the government of country G that could result from the nationalisation of LBM.
<table>
<tr><th>Level</th><th>AO1 Knowledge and understanding
2 marks</th><th>AO2 Application
2 marks</th><th>AO3 Analysis
4 marks</th></tr>
<tr><td>2</td><td></td><td></td><td>3–4 marks
Developed analysis
• Developed analysis that identifies connections between causes, impacts and/or consequences of two points.
• Developed analysis that identifies connections between causes, impacts and/or consequences of one point.</td></tr>
<tr><td>1</td><td>1–2 marks
• Knowledge of two relevant points is used to answer the question.
• Knowledge of one relevant point is used to answer the question.</td><td>1–2 marks
• Application of two relevant points to a business context.
• Application of one relevant point to a business context.</td><td>1–2 marks
Limited analysis
• Limited analysis that identifies connections between causes, impacts and/or consequences of two points.
• Limited analysis that identifies connections between causes, impacts and/or consequences of one point.</td></tr>
<tr><td>0</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td></tr>
</table>
Note
• Only reward advantages
• If more than two advantages are referred to, reward the best two.
</td><td>8</td></tr>
</table>

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Question	Answer	Marks
1	Responses may include: **AO1 Knowledge and understanding** Definition or explanation of nationalisation: ownership of a business is transferred from private to public (Max K1). Possible advantages include: • Government control over the development of a scarce resource. • Funding for research and production can be guaranteed. • Profits paid to the government not to shareholders. • Enables lithium production in country G even if this is marginally profitable or loss making. • Minimises possibility of foreign takeover. • Restricts monopoly power to charge high prices. • Can ensure that the business acts in the public interest e.g. reducing externalities **AO2 Application** *Limited application,* APP *applies knowledge to LBM once.* *Developed application,* APP - APP *applies knowledge to LBM twice.* *Max one* APP *for application for the first advantage and max or* APP *for application for the second advantage.* • LBM is the only business in country G planning to mine lithium. • Government concern that demand from industry for lithium in country G will not be met in the long-term. • Prevent a hostile takeover from a multinational business. • LBM is currently unprofitable, but revenue is forecast to rise rapidly. • Possibility of future price rises/profits as demand to supply ratio increases. • Pollution from production of lithium • Lithium is an essential raw material used in batteries for electric vehicles, smartphones and other products.	

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Question	Answer	Marks
1	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • By controlling the only source of lithium in Country G, the government can ensure that local industry demand is met, preventing supply bottlenecks AN and supporting key economic sectors like electric vehicles thus promoting economic growth L2 AN . • Nationalisation prevents a hostile takeover by a multinational business, ensuring future forecast rapidly rising revenue remains within the country AN , which can then be used by the government to fund public services or infrastructure L2 AN . • The government can absorb the initial losses of the currently unprofitable LBM to secure control over a crucial long-term resource, mitigating uncertainty regarding private sector commitment AN and therefore encouraging investment in manufacturing in country G L2 AN . • Government control means control of supply to battery producers, maximising country G production capability AN and therefore reducing reliance on foreign import L2 AN . • Profits to the government likely to be higher source of income than tax receipts from profits to shareholders and will therefore support government spending on its objective AN . Accept all valid responses Exemplar answer demonstrating skills: The government is currently very concerned that demand from industry in Country G for lithium will not be met in the long-term. By nationalising LBM, the government can dictate production priorities, ensuring that adequate supply is maintained domestically, thereby preventing supply bottlenecks and supporting key economic sectors that rely on this raw material. This ultimately safeguards long-term industrial and economic stability within Country G. Although LBM is currently unprofitable, losing $2–3 million per year, its revenue is forecast to rise rapidly once mining begins. By nationalising the business, the government ensures that this potentially high future revenue is retained within the country's public finances. This retained profit can then be directed towards public services, infrastructure development, or subsidising local industries, rather than flowing out of Country G to a foreign multinational	

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>2</td><td>
Analyse <u>one</u> benefit and <u>one</u> limitation of sales forecasting to LBM as it begins its mining operations.
<table>
<tr><th>Level</th><th>AO1 Knowledge and understanding
2 marks</th><th>AO2 Application
2 marks</th><th>AO3 Analysis
4 marks</th></tr>
<tr><td>2</td><td></td><td></td><td>3–4 marks
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• Developed analysis that identifies connections between causes, impacts and/or consequences of two points.
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No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
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</table>
Note
• Only reward benefits or limitations
• If more than one benefit or limitation is referred to, reward the best.
</td><td>8</td></tr>
</table>

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Question	Answer	Marks
2	Responses may include: **AO1 Knowledge and understanding** • Sales forecasting involves making a prediction of future sales volumes or revenues. • Time series analysis is a method of forecasting based on extrapolation from past data. (maximum of 1 mark for definition of TSA / sales forecasting) • Benefits include (max K 1 mark): – Contribution to workforce planning. – Planning purchase of resources. – Greater accuracy in cash flow forecasting. – Aids operational decisions. – Aids decisions about pricing. – Identifies both trend and seasonal variation. • Limitations (max K 1 mark) – Lack of historical data to use quantitative technique – Uncertainty regarding external influences **AO2 Application** *Limited application,* APP *applies knowledge to LBM once.* *Developed application,* APP - APP *applies knowledge to LBM twice.* *Max one* APP *for application to a benefit and max on*- APP *for application to a limitation.* Application is making use of relevant case information not just repeating it. • LBM is just beginning its mining operations. • Output is difficult to vary at very short notice. • Holding inventory of lithium involves high costs. • Variations in demand for electric vehicles and smartphones exist. • Alternatives to lithium are being developed. • New hard rock mining under development. • Global demand for lithium is rising and supply will not meet demand after 2030.	

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Question	Answer	Marks
2	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* Benefits • Accurate sales forecasts are crucial because output from lithium mines is difficult to vary at short notic AN thus allowing LBM to plan production capacity in advance to ensure sufficient lithium is available to meet forecast rapidly rising demand. • Sales forecasts important in planning resource needs and therefore keeping costs low AN which will increase efficiency and therefore profit Limitations • Accuracy and reliability depend on market conditions remaining the same – this is possibly not likely in the lithium market due to variation s in demand for products containing batterie AN resulting in failure to capitalise on market growth L2 AN . • Accuracy and reliability are higher in the near future so longer term forecasts are less reliable reducing the usefulness of forecasting to planning AN . • SF relies on historical data/trends but the future of lithium demand is uncertain due to variations in demand for electric vehicles and smartphones and the development of alternatives; this lack of reliability means LBM may miscalculate production AN , leading to high inventory holding cost L2 AN or. Accept all valid responses Exemplar answer By anticipating future sales levels, LBM can use SF to plan resource needs effectively, ensuring the efficient scheduling of machinery and labour well in advance of peak demand. This forward planning helps minimise operational waste and controls production costs, which is vital given LBM is currently losing money and needs to move towards profitability quickly. A key limitation is that sales forecasting, particularly methods based on extrapolation from past data, relies on the assumption that future conditions will resemble the past. This is unreliable for LBM because the lithium market faces significant external volatility. There are likely to be variations in demand for electric vehicles and smart phones over time, and, crucially, alternatives to lithium are being developed. These factors are difficult to integrate into simple historical trend analysis, meaning LBM's forecasts might be inaccurate. If the forecasts are too optimistic, LBM could face high inventory holding costs for this raw material, which are specifically noted as 'high costs', potentially worsening LBM's current financial losses	

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Question	Answer	Marks
3(a)	**Using the data in Table 1.1, calculate the payback period.** Payback period is time taken to recover the initial investment. **OR** Initial investment = $320m. **OR** Payback in sixth year (1 mark) (no of months = 10/120 * 12 = 1 month) Payback period is 5 years 1 month **OR** 5.08 years (2 marks)	**2**
3(b)	**Using the data in Table 1.1, calculate the net present value (NPV) over six years discounted at 8%.** NPV is the value today of future cash flows net of the original cost of investment. **OR** Total discounted net cash flows = $307.63m **OR** Discounted capital cost = $311.11m (1 mark) NPV = 307.63 – 311.11 = ($3.48m) (2 marks) Accept 3.5	**2**

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>3(c)</td><td>Evaluate LBM’s decision to go ahead with the hot water test mine.
<table>
<tr><th>Level</th><th>AO1 Knowledge and understanding
2 marks</th><th>AO2 Application
2 marks</th><th>AO3 Analysis
2 marks</th><th>AO4 Evaluation
6 marks</th></tr>
<tr><td>3</td><td></td><td></td><td></td><td>5–6 marks
Developed evaluation in context
• A developed judgement/conclusion is made in the business context.
• Developed evaluative comments which balance some key arguments in the business context.</td></tr>
<tr><td>2</td><td>2 marks
Developed knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>2 marks
Developed application of relevant point(s) to the business context.</td><td>2 marks
Developed analysis that identifies connections between causes, impacts and/or consequences.</td><td>3–4 marks
Developed evaluation
• A developed judgement/conclusion is made.
• Developed evaluative comments which balance some key arguments.</td></tr>
<tr><td>1</td><td>1 mark
Limited knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>1 mark
Limited application of relevant point(s) to the business context.</td><td>1 mark
Limited analysis that identifies connections between causes, impacts and/or consequences.</td><td>1–2 marks
Limited evaluation
• A judgement/conclusion is made with limited supporting comment/evidence.
• An attempt is made to balance the arguments.</td></tr>
<tr><td>0</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td></tr>
</table></td><td>12</td></tr>
</table>

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Question	Answer	Marks
3(c)	Responses may include: **AO1 Knowledge and understanding** • Understanding of the use of investment appraisal – payback period, NPV including advantages (quantitative, based on data, NPV factors in time value,) and disadvantages (predictions may be inaccurate as circumstances change, false sense of accuracy, providers of data may be biased and provide misleading data). • Qualitative factors in investment decisions include: • Attitude to risk. • Impact on stakeholders e.g. environmental/social considerations, future economic changes. • How well the project fits the business objectives. **AO2 Application** *Limited application,* APP *applies knowledge to LBM once.* *Developed application,* APP - APP *applies knowledge to LBM twice.* Application is making use of relevant case information not just repeating it. • Quantitative results (Payback 5 years 1 month; NPV –$3.48m over 6 years). • Project life span is 15 years, but cash flows are only appraised for 6 years. • LBM has strict finance limitations (no adverse variances allowed). • The project has local opposition. • The hot water extraction process allows water to be used for heating local housing. • LBM is currently losing $2–3 million per year. • Estimated 15 year life span. • Uncertain forecasting beyond six years. • Non-inclusion of data relating to possible extraction of other metals. • Objective of LBM is to produce lithium. • Decreasing supply/demand gap (after 2030 demand>supply). • LBM only producer in country G. • Test mine is the first project, next is hard rock mining. • Government concerned to get lithium production in country G, • LBM has the finance.	

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Question	Answer	Marks
3(c)	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • The negative NPV (-$3.48m) over six years suggests the project does not cover its costs of capital and should be rejected AN, thus ensuring LBM does not deepen its existing losse L2 AN . • The project lifespan is 15 years, and the uncounted positive cash flows in Years 7–15, coupled with rapidly rising global demand for lithium, could lead to a highly positive overall NP AN , significantly increasing future reveni L2 AN . • If LBM experiences adverse variances, they may run out of finance, leading to project failure AN and a loss of the large initial investment ($200m + $120m) L2 AN . • The dual benefit of extraction and heating local housing may satisfy social objectives and reduce local oppositio AN , thereby lowering the risk of delays L2 AN . • Learning from this project will enhance performance in future projects, therefore increasing the likely success of the hard rock mining project AN • The price of lithium is likely to continue to rise resulting in higher revenues in years 7– AN . • Other producers may appear causing lower lithium prices and therefore reduce forecast net cash flo AN . • If other metals can be recovered the revenue figures may be higher than foreca AN . **AO4 Evaluation** *Limited evaluation* EVAL *– limited supported judgement and/or a weak attempt at evaluative comment.* *Developed evaluation* L2 EVAL *– supported judgement and/or reasonable evaluative comment.* *Developed evaluation in contex* L3 EVAL *– supported judgement in context and/or reasonable evaluative comment in context.* • Supported judgement as to whether LBM should proceed. • Quantitative investment appraisal indicates the decision is unwise as NPV is negative but likely positive ARR, and NPV very close to zero mean qualitative factors may be more important. • Factors that decision might depend on: – Reliability of the estimated cash flows for the remaining 9 years; – LBM's willingness to accept high financial and operational risk (local opposition, tight budget); – the importance of social benefits (heating local housing) versus financial return. – Accuracy of the discount factor and forecast cash flow. In the changing lithium market the indicators are that they are possibly neither, but the most likely possibility is that revenues will be higher than forecast.	

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Question	Answer	Marks
3(c)	• the risk appears to be low and the finance is available. • If LBM does not go ahead, it is likely to go out of business due to increasing losses. • The decision is highly subjective due to **high uncertainty** beyond Year 6. Given that LBM is currently unprofitable and operates with tight funding, the negative NPV indicates high risk. However, strategically, LBM must establish mining operations to leverage the rapid revenue forecast. • The project should probably be delayed or redesigned until LBM can secure sufficient finance to absorb potential adverse variances and until a more reliable long-term forecast can demonstrate a clearly positive NPV over the full 15 years Accept all valid responses Exemplar L3 Evaluation The decision hinges on LBM's risk tolerance and belief in the long-term forecast. While the negative NPV over the appraised period suggests that rejecting the project would be financially prudent for a company currently operating at a loss, strategically, LBM must establish mining operations to survive and capture future revenue. However, the decision is contingent on securing a buffer of finance to tolerate adverse variances. Given the extremely tight financial limitations, LBM should consider conducting a sensitivity analysis on the cash flows for years 7–15 to demonstrate that the strategic gain outweighs the immediate financial risk. If LBM cannot demonstrate a substantial expected NPV over the full 15 years, or if the tight budget cannot be loosened, the project should be delayed until funding is more secure to protect the business from insolvency.	

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Question	Answer	Marks
4(a)(i)	**Using Figure 1.1: calculate the total float for activity C** Total float is the maximum time an activity can be delayed without delaying the whole project time or LFT – duration – EST **OR** LST – EST (1 mark) Total float = 80 – 40 – 30. (2 marks) = 10 weeks (3 marks) No need for weeks	**3**
4(a)(ii)	**identify the minimum project duration.** Sum durations of critical path: 40 + 60 + 10 + 5 = 115 weeks (1 mark) No need for weeks	**1**

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>4(b)</td><td>Evaluate the importance of Critical Path Analysis (CPA) to the success of the hard rock mine.
<table>
<tr><th>Level</th><th>AO1 Knowledge and understanding
2 marks</th><th>AO2 Application
2 marks</th><th>AO3 Analysis
2 marks</th><th>AO4 Evaluation
6 marks</th></tr>
<tr><td>3</td><td></td><td></td><td></td><td>5–6 marks
Developed evaluation in context
• A developed judgement/conclusion is made in the business context.
• Developed evaluative comments which balance some key arguments in the business context.</td></tr>
<tr><td>2</td><td>2 marks
Developed knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>2 marks
Developed application of relevant point(s) to the business context.</td><td>2 marks
Developed analysis that identifies connections between causes, impacts and/or consequences.</td><td>3–4 marks
Developed evaluation
• A developed judgement/conclusion is made.
• Developed evaluative comments which balance some key arguments.</td></tr>
<tr><td>1</td><td>1 mark
Limited knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>1 mark
Limited application of relevant point(s) to the business context.</td><td>1 mark
Limited analysis that identifies connections between causes, impacts and/or consequences.</td><td>1–2 marks
Limited evaluation
• A judgement/conclusion is made with limited supporting comment/evidence.
• An attempt is made to balance the arguments.</td></tr>
<tr><td>0</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td></tr>
</table></td><td>12</td></tr>
</table>

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Question	Answer	Marks
4(b)	Responses may include: **AO1 Knowledge and understanding** *Limited knowledge* K *will be demonstrated through knowledge of CPA.* *Developed knowledge* K + K *will be demonstrated through knowledge of CPA and its usefulness.* • Knowledge of CPA: network, EST, LFT, floats, nodes, minimum duration, critical path. • Benefits of CPA: calculation of project duration – knowing when activities should start – knowing latest finish times – knowing critical path – knowing floats. • Limitations of CPA: – analysis only as good as the data. – new projects may not have past experience as a guide – planning costs. – does not ensure effective management. • Knowledge of other factors: availability of finance, materials and equipment. • Investment appraisal methods also needed to assess financial criteria for success. • Business objectives matching project aims. **AO2 Application** *Limited application,* APP *applies knowledge to LBM once.* *Developed application,* APP - APP *applies knowledge to LBM twice.* Application is making use of relevant case information not just repeating it. • Hard rock mine follows the hot water mine, which will be nearing completion of building and about to start production. • need to buy equipment for drilling and factory. • data for CPA from partners, suppliers and R and D. • Minimum project duration is just over two years. • CPA relates to the complex sequence of activities (A to H) involved in establishing the hard rock mine. • The planned start of the mine is in two years' time (104 weeks), but the calculated duration is 115 weeks. • CPA uses data obtained from mining industry sources and the LBM Research and Development (R&D) team. • Lithium is found 500 metres underground. • Activity C (Obtain drilling machinery) has 15 weeks of float.	

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Question	Answer	Marks
4(b)	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • CPA identifies the critical activities (A-H route through nodes 1–2-4–5–7–8, for example) which, if delayed, will delay the whole project duration. This allows LBM, a new mining operator, to focus its limited resources and management supervision on these tasks AN , thereby preventing cost overrur L2 AN . • CPA reveals that the current duration (115 weeks) already exceeds the planned start time (2 years/104 weeks). This forces LBM to find ways to shorten the duration to meet the original targ AN , maximising early revenue generation L2 AN . • The calculation of float (e.g., 15 weeks for activity C) enables Astor to reallocate resources away from non-critical tasks to critical ones AN , helping to reduce the overall project duration and improving efficien L2 AN . • As this is the first mining activity for LBM there is no past experience to rely on therefore the data may be inaccurate AN **AO4 Evaluation** *Limited evaluation* EVAL *– limited supported judgement and/or a weak attempt at evaluative comment.* *Developed evaluation* L2 EVAL *– supported judgement and/or reasonable evaluative comment.* *Developed evaluation in contex* L3 EVAL *– supported judgement in context and/or reasonable evaluative comment in context.* • Supported judgement as to the importance of CPA. • CPA is highly important for the success of the hard rock mine because the project is complex and already forecasted to be delayed (115 weeks vs 104 weeks goal). CPA provides the necessary planning and monitoring framework to potentially shorten this delay and secure timely revenue. • Factors that the impact might depend on: – CPA relies entirely on the accuracy of time estimates provided by the R&D team and suppliers. If these estimates are inaccurate (e.g., optimistic), the critical path may be wrong, leading LBM to misallocate resources and still fail to achieve the minimum duration. • CPA must be continuously monitored and updated as the project progresses to account for unexpected operational difficulties (e.g., drilling 500m underground). • Project success also depends on availability of finance, equipment and appropriate employees. Without them the project is less or not likely to succeed.	

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4(b)	Accept all valid responses Exemplar L3 Evaluation The benefit of CPA is limited by its reliance on assumptions. CPA's success depends entirely on the accuracy of the time estimates for activities like D (Install drilling machinery) and E (Test drill exercise), which were obtained from mining industry sources and the LBM Research and Development (R&D) team. Since LBM is a new operator in Country G, and the scale of this project (drilling 500 m) is complex, these estimates may be overly optimistic or inaccurate. If the critical path calculation is flawed, LBM might misallocate resources, potentially causing unnecessary delays in the 115-week plan or wasting scarce finance.	

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>5</td><td>Evaluate LBMs decision to use two different approaches to HRM.
<table>
<tr><th>Level</th><th>AO1 Knowledge and understanding
2 marks</th><th>AO2 Application
2 marks</th><th>AO3 Analysis
2 marks</th><th>AO4 Evaluation
6 marks</th></tr>
<tr><td>3</td><td></td><td></td><td></td><td>5–6 marks
Developed evaluation in context
• A developed judgement/conclusion is made in the business context.
• Developed evaluative comments which balance some key arguments in the business context.</td></tr>
<tr><td>2</td><td>2 marks
Developed knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>2 marks
Developed application of relevant point(s) to the business context.</td><td>2 marks
Developed analysis that identifies connections between causes, impacts and/or consequences.</td><td>3–4 marks
Developed evaluation
• A developed judgement/conclusion is made.
• Developed evaluative comments which balance some key arguments.</td></tr>
<tr><td>1</td><td>1 mark
Limited knowledge of relevant key term(s) and/or factor(s) is used to answer the question.</td><td>1 mark
Limited application of relevant point(s) to the business context.</td><td>1 mark
Limited analysis that identifies connections between causes, impacts and/or consequences.</td><td>1–2 marks
Limited evaluation
• A judgement/conclusion is made with limited supporting comment/evidence.
• An attempt is made to balance the arguments.</td></tr>
<tr><td>0</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td><td>0 marks
No creditable response.</td></tr>
</table></td><td>12</td></tr>
</table>

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Question	Answer	Marks
5	Responses may include: **AO1 Knowledge and understanding** • Understanding of 'hard HRM: – viewing employees as a inputs for the business, close monitoring, and control, training to improve business performance, little delegation of decision making. – leadership style likely to be autocratic – power for leader comes from rewards, position or coercion. – little space for emotional intelligence. – One-way formal communication (top down) • Understanding of 'soft' HRM: employees are individuals, to be developed, e.g. by appraisal and training, consultation and delegated decision making. – leadership style likely to be democratic or laissez-faire. – leader likely to use contingency leadership – power for leader comes from expertise, information or charisma. – transformational leadership possible. – emotional intelligence employed. – Two-way communication, possibly informal. **AO2 Application** *Limited application,* APP *applies knowledge to LBM once.* *Developed application,* APP - APP *applies knowledge to LBM twice.* Application is making use of relevant case information not just repeating it. • Soft HRM is used for the **35 graduate employees**. • These graduates have delegated powers and decide their own work patterns (autonomy). • Graduates are involved in R&D, mapping technology, and developing techniques. • Hard HRM is used for the **150 new machine operators** at the hot water mine. • These new employees are closely supervised by ten technology specialists.	

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Question	Answer	Marks
5	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • changing HRM approaches takes time and cost to plan details. • Using Soft HRM for graduates increases their motivation and creativity, which is crucial for maximizing the efficiency of mapping technology and generating innovative mining techniques AN , thereby increasing LBM's competitiveness L2 AN . • Small number of graduate employees should be easy to manage and soft approach will reuce need for middle management AN therefore reducing costs L2 AN . • Hard HRM focuses on tight control and efficiency for the 150 machine operators. This approach ensures standardisation and low labour costs, AN which is important for LBM, as it is currently an unprofitable company L2 AN . • The stark difference in treatment (delegation vs. close supervision) risks creating resentment and conflict between the two groups, potentially leading to poor morale AN and resistance among the machine operators, threatening operational stability L2 AN . • Production requires clearly defined tasks so more control/autocracy can be more efficie AN . • Very tight time scale for hard rock project means HRM changes must be well planne AN **AO4 Evaluation** *Limited evaluation* EVAL *– limited supported judgement and/or a weak attempt at evaluative comment.* *Developed evaluation* L2 EVAL *– supported judgement and/or reasonable evaluative comment.* *Developed evaluation in contex* L3 EVAL *– supported judgement in context and/or reasonable evaluative comment in context.* • Supported judgement as to the likely effectiveness of the approach. • The decision to use dual approaches is largely appropriate because the nature of the jobs is vastly different (creative R&D vs. standardised machine operation). The soft approach is essential for knowledge workers (graduates) to foster innovation, while the hard approach is effective for large groups performing repetitive tasks in a controlled industrial environment like a mine.	

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Question	Answer	Marks
5	• Factors that the impact might depend on: – The degree of separation between the two employee groups; – LBM's ability to minimise perceived unfairness; – the specific skills required by the machine operators (if tasks are complex, hard HRM may lead to high error rates and reduced quality). – Can LBM afford to change? In time for recruiting and starting production? • The decision is strategically sound but requires careful management. LBM must ensure communication and compensation systems do not exacerbate the cultural divide, or the benefits of high R&D output might be negated by industrial relations problems at the mine site. Accept all valid responses Exemplar L3 Evaluation The decision to use two different approaches is strategically sound and appropriate because it matches the HRM approach to the specific needs of each job role (innovation for R&D vs. control for operations). LBM's dual HRM strategy is necessary for functional efficiency but dangerous for internal culture. The success of this decision is conditional upon management (led by Astor) successfully mitigating the risk of conflict. LBM must invest in transparent communication explaining why the roles are managed differently and ensure that the machine operators feel valued through factors other than autonomy, such as fair compensation or training opportunities, to prevent internal dissatisfaction from undermining the profitability of the new mine	

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