Cambridge International AS & A Level Cambridge Assessment International Education Cambridge International Advanced Subsidiary and Advanced Level

BUSINESS

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Paper 3 Case Study MARK SCHEME Maximum Mark: 100

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 2019 series for most Cambridge IGCSE[™], Cambridge International A and AS Level components and some Cambridge O Level components.

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.

Question			Answer		Marks
1		e the likely impact or ar market.	n AEV's profit of	intervention by governments	10
	Level	Knowledge 3 marks	Application 2 marks	Analysis 5 marks	
	2	3 marks Understanding of impact/intervention	2 marks Points applied to AEV	4–5 marks Good use of theory and/or reasoned argument to explain impact on profit	
	1	1–2 marks Identification of intervention and/or impact	1 mark Point applied to AEV	1–3 marks Some use of theory and/or reasoned argument to explain impact	
	– – • Unc rela	constrain business a Indirect taxation (to o business Subsidies/governmen encourage an increas lerstanding of impact ted to indirect tax on o	at businesses hav ctivity correct market fail nt grants. Reduce se in output of subsidies on A	ervention: ve to abide by in a market and ure). Increase costs of supply to e the costs of production and EV, e.g. increase in AEV sales	
	ove cars Incr Ben AE\ AE\ Gov cars	on sale of diesel cars r non-electric cars in t s and ban will increase ease in fuel duty on p hefit is in long term as / vehicles with zero en / has received \$1 bn i / renment action to inc	he market OR go e competition in e etrol in 2019 will some regulations missions will not l n government gra rease availability	s will come into force in 2030 be subject to the regulations	

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Question	Answer	Marks
1	 Analysis Diesel ban will reduce competition for AEV resulting in a potential increase in sales of electric vehicles and increase in AEV's profits as a result Announcement of changes will influence trends in the market leading to a rise in electric vehicle sales immediately Increase in fuel duty will make vehicles using petrol/diesel less competitive in the market. This will boost AEV sales, as electric vehicles will be relatively less expensive to run Country C tax on imports will increase the selling price of AEV cars reducing demand and profit Subsidies received by AEV from government may have conditions attached which impact AEV operations Subsidies received by AEV provides finance for investment to develop products, manufacturing and workforce Subsidies enable expansion of output by reducing costs and therefore increase sales and potentially profit 	

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Question	Answer	Marks
2(a)(i)	Refer to Appendix 1. Calculate for 2019:	3
	the dividend yield	
	Units necessary for full marks	
	dividend yield = dividend per share/share price × 100 and/or dividend per share = total dividend/number of shares (1 mark if no relevant working)	
	dividend per share = 10/70 = (\$)0.143 (1)	
	dividend yield = 0.143/130 × 100 (2)	
	dividend yield = 0.11% or 0.1% or 0.1098% (3)	
	0.11 (2)	
	Common errors Total dividend rather than dividend per share: 10/130 × 100 = 7.69(%) (relevant working required) (1)	
	OFR applies	
2(a)(ii)	the price earnings ratio	4
	price earnings ratio = share price/EPS (1 mark if no relevant calculation)	
	EPS = profit for the year/total shares issued (1 mark if no relevant calculation)	
	EPS = 48/70 (1) EPS = 48/70 = (\$)0.69 or 0.7 or 0.686 (2)	
	Price earnings ratio = 130/0.69 (3)	
	Accept range for PER between: 185.7 to 191.2 (years or times) (4)	
	185.7 to 191.2 \$ or % (3)	
	Errors Earnings rather than earnings per share 130/48 = 2.71 (years or times) (2 marks if appropriate working shown)	
	Incorrect profit figure used \$60 m Answers within range 151 to 153 (years or times), e.g. 130/0.857 = 151.69 (3 marks appropriate working required)	
	OFR applies	

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Question	Answer	Marks
2(a)(iii)	the return on capital employed.	3
	Units necessary for full marks	
	ROCE = Operating profit/capital employed × 100 (1 mark if no relevant calculation)	
	Capital employed = 3 + 2.5 = 5.5(\$ bn) (1)	
	ROCE = 0.06/5.5 × 100 (2)	
	ROCE = 1.09% (3) 1.09 (2)	
	Profit for year used 0.048/5.5 × 100 = 0.87% (2)	
	Following answers are given 2 marks if relevant working shown: $0.06/2.5 \times 100 = 2(\%)$ $0.06/3 \times 100 = 2.4(\%)$ $0.6/5.5 \times 100 = 10.9(\%)$	
	OFR applies	

Question	Answer							
2(b)				ion. Recommend wh n AEV. Justify your r		12		
	Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks			
	2	2 marks Two relevant points	2 marks Two points applied	3–4 marks Good use of theory and/or reasoned argument to analyse factors	3–4 marks Good judgement shown, e.g. well supported conclusion			
	1	1 mark Relevant point	1 mark Point applied	1–2 marks Some use of theory and/or reasoned argument to analyse factors	1–2 marks Some judgement shown, e.g. one factor very important			
	 Examiner note: L1 AN & EVAL if only refer to results from 2(a) OR other information Knowledge Investors will be interested in the return on their investment – Capital gains from increase in share price 							
	 Dividend paid for ownership Understanding of relevant factors in decision Assessment of future profitability of AEV Current performance, e.g. profit of AEV, ROCE, PER, dividend yield Return of alternative investments 							
	 Application Price earnings ratio of 188 is very high and suggests that shareholders will take many years to gain a return on their investment but also suggests that market has confidence about future profitability of AEV Low ROCE of only 1.09% Dividend yield is very low – 0.11% Proposed increase in dividend to be paid in 2019 from 2018 Share price has risen by 30% in last year Regulatory changes should benefit AEV and therefore its profits Market capitalisation of AEV is high relative to assets of the business AEV profits have become positive in last year Current ratio has decreased and is quite low (below 1.5) so may suggest concern about liquidity AEV has used significant cash over last year (\$200 m) Successful R & D to improve battery technology Production delays and quality problems 							

Question	Answer	Marks
2(b)	 Analysis AEV faces many difficulties in increasing profits and profitability – problems in operations to meet demand and need to increase finance to fund expansion. This means that investment is risky for potential investors Akira committed to growth strategies. This will reduce dividends in the future as any profits likely to be retained for investment Profitability is low suggesting lack of dividend payments Markets are changing in AEV's favour. This will increase future potential for profits and therefore returns to investors 	
	 Evaluation Justification of most important factor This is a risky investment as AEV profits are low and returns are long term Is the market capitalisation unrealistic and purely based on potential rather than actual performance? Dividend yield is very low: 0.11% – how does this compare with other investments? 	

Question	Answer					Marks	
3	 'AEV is unable to meet this demand due to a lack of capacity and supply constraints' (Lines 47–48). Other than expansion of CellX, discuss ways in which the Operations Management Department of AEV could solve this problem. 						
	Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks		
	2	2 marks Two relevant points	2 marks Good application to AEV	4–6 marks Good use of theory and/or reasoned argument to	4–6 marks Good judgement shown		
	1	1 mark One relevant point	1 mark Some application to AEV	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown		
	 Knowledge Definition of capacity: maximum output achievable with current resources Identification/understanding of options Outsourcing production Improve efficiency – increase labour productivity, e.g. by motivating employees more effectively Reduce labour turnover New manufacturing base Find new suppliers Take over supplier 						
	 JIT manufacturing/lean production (more efficient use of existing resources) Increase capital intensity at CellX 						
	 Increunits Akira reduce Sour Take Investing Negotian 	ters already facin ease in production per year a is worried about ces output ce materials for t over supplier in st in new manufa	n required is sig t labour turnove patteries from co country C cturing plant in union as 80% of	nificant. Current produ r. This is a contributor ountries other than cou country f workforce is unionise	y factor that untry C		

Question	Answer	Marks
3	 Analysis Outsourcing could risk loss of control over quality of components such as batteries. This could further impact reputation of AEV Outsourcing involves no major capital investment and therefore aids AEV's cash flow Establishing a new manufacturing base will be expensive and affect AEV's cash flow and result in greater coordination problems – diseconomies of scale Reducing labour turnover will ensure that AEV keeps experienced workers and thus enable an increase in output JIT manufacturing/lean production enables a more efficient use of resources thus increasing output per worker JIT can reduce storage of inventory and allow a more efficient use of space for production leading to an increase in output Evaluation Depends on the cost of outsourcing Difficult working conditions may make reducing labour turnover challenging As batteries depend on rare materials it may not be possible to source the materials from elsewhere Given the increase in production required expansion of CellX may be only viable approach but this will take time and not alleviate the immediate capacity problems faced Supplier constraints likely to be faced by all manufacturers of electric vehicles so gaining control of supplier may be the best option Some options may in theory enable an increase in capacity but do not necessarily address the supply constraints faced JIT manufacturing Improvements in efficiency Reduction in wastage 	

Question	Answer	Marks
4(a)	Refer to Table 1. Calculate the difference in labour turnover between 2017 and 2018.	4
	For full marks units are necessary	
	Labour turnover = Number of employees leaving over period/Average number of employees during period \times 100 (1 mark if no relevant calculation)	
	Labour turnover 2018 = 165/1300 × 100 = 12.69(%) Allow appropriate rounding (1)	
	Labour turnover 2019 = 250/1500 \times 100 = 16.67(%) Allow appropriate rounding (1)	
	Change in labour turnover = 4% (points) (increase of 31.5%) (4) Within range of 3.9% – 4% (4)	
	Within range of: 3.9–4 or 31.5 (3)	
	OFR applies	

Question			Ansv	ver		Marks
4(b)	Discuss the importance of human resource management to the success of the planned expansion of the CellX manufacturing centre.					
	Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks	
	2	2 marks Two relevant points	2 marks Two points of application	3–4 marks Good use of theory and/or reasoned argument	3–4 marks Good judgement shown e.g. well supported conclusion	
	1	1 mark One relevant point	1 mark One point of application	1–2 marks Some use of theory and/or reasoned argument	1–2 marks Some judgement shown	
	effective r business Understa • Need • Motiv • Impol succe • Recru • Recru • High • High • High • Work • Need • Refer - L	management of gain a competition anding of role of for workforce pration of employ rtance of cooper ess uitment, selection on labour turnover union density force planning t to double output	an organisation' ive advantage. of HRM lanning ees ration between r on and training of 16.7% is a pr o recruit 2000 w ut per employee of employee diss		they help the he workforce to erations	
	 Quali Analysis If labeled the generation of t	our turnover cor rowing demand ation and future ty problems will to be addresse	y be linked to en ntinues to increas for vehicles. De sales as custon also harm sales d to improve pro	ays in delivery of ners will go elsewh in the long term.	AEV's ability to meet vehicles will impact here Employee concerns	

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Question	Answer	Marks
4(b)	 Evaluation Justification of most important issue Success of expanded CellX depends crucially on employees. HRM is critical in terms of planning and execution of the expansion There are other factors that will also determine success, e.g. supplies of raw materials from country C for the batteries Depends on availability of finance 	

Question	Answer					
5	Discuss the significance of product development to AEV's future success.					
	Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks	
	2	2 marks Good knowledge shown	2 marks Good application to AEV	4–6 marks Good use of theory and/or reasoned argument	4–6 marks Good judgement shown	
	1	1 mark Some knowledge shown	1 mark Some application to AEV	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown	
	produ Defir produ Defir techr Bene – 0 – 1 Applicati Signi adva Refe – 1 R&D AEV produ Refe Move Analysis As bi comp Elect maki dista Incre prom	ition of product of uct for existing m nition of product of ucts or new develop ition of research nological develop efits of product de Competitive adva Developing prod ion ificance of impro intage. R&D's co rence to data in R & D: \$400 m in has helped redu 4 model importation ucer rence to develop e to profitability in attery costs fall t petitiveness of A tric vehicle sales ing them less des naces easing energy de notion of AEV pro- elopment of AEV eased sales and p ance reputation a	harket development: t elopments of ex- pand development: and development: antage ucts to meet cu- vements in bat intribution to ine Fig. 1 a 2019 increase uce battery cos int to take AEV bing electric true n 2019 is a resu hen price can the EV relative to co face constrain sirable than alte nsity will impro- poducts to gain co 4 broadened A profit	nent: scientific research I contribute to product of Istomer expectations tery technology to gain creasing energy densit ed from \$150 m in 2015 ts by 75% from a niche producer ck ult of R&D	ale of new a and development ing competitive y to a mass the n battery charge ity of driving long a be used in sulting in	

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Question	Answer	Marks
5	 Evaluation Product development essential in this market as without it product unable to compete with existing technologies Cost of research is high and not guaranteed to be successful First mover advantage may be important Dynamic nature of the car market requires AEV to be constantly developing its products to maintain a competitive edge Other factors will be important to future success, e.g. government policy 	

Level	Knowledge 3 marks	Application 3 marks	Analysis 4 marks	Evaluation 10 marks
3				7–10 marks Good judgement shown throughout with well supported conclusion/recommendation, focused on the business in the case
2	3 marks Good understanding shown	3 marks Good application to the case	3–4 marks Good use of reasoned argument or use of theory to explain points made	4–6 marks Some judgement shown in the main body of the answer and an attempt to support conclusion/recommendation, focused on the business in the case OR effective and well supported conclusion/ recommendation, focused on the business in the case
1	1–2 marks Some understanding shown	1–2 marks Some application to the case	1–2 marks Limited use of reasoned argument or use of theory to support points made	1–3 marks Limited attempt to show judgement either within the answer OR a weakly supported conclusion/ recommendation with some focus on the business in the case
0		1	No credita	able content

Questions 6 and 7 use this marking grid:

Question	Answer	Marks
6	Evaluate the importance of business planning to AEV's future profitability.	20
	Examiner reminder: L2 EVAL should be awarded if: some judgement shown in the main body of the answer and an attempt to support conclusion/recommendation, focused on the business in the case OR effective and well supported conclusion/recommendation, focused on the business in the case	
	 Knowledge Definition of business planning: setting objectives and determining strategies and their implementation to achieve objectives including the use of contingency planning for unexpected events Planning gives direction to the business Planning promotes coordination of different parts of business towards a single goal Helps secure finance from investors 	
	 Application Failure of AEV to meet demand for AEV4 Problems of quality with previous model launches and link to planning Reference to the two strategic options under consideration Reference to the expansion of CellX Reference to R&D and market objectives of AEV 	
	 Analysis Analysis of benefits of planning and consequences of poor planning Failure of AEV to plan appropriately for demand for AEV4 is damaging cash flow and reputation and therefore will lose profits Expansion of CellX factory requires resources – capital and labour – planning necessary to ensure disruption to production is minimised and resources available as necessary Joint venture requires planning to overcome cultural differences between organisations and deal with issues regarding operating in another country, e.g. dealing with the government. How the joint venture is to be managed will need to be established in advance of operations 	

Question	Answer	Marks
6	 Evaluation AEV operates in a dynamic market and therefore planning is essential to ensure the effective use of resources to meet changes in the market Planning needs to be reviewed in light of changes in the market, e.g. considering impacts of changes in the law and to be constantly updated Planning is important but without effective implementation success less likely Planning more likely to be effective if it is agreed so communication with, and involvement of, employees are important 	

Question	Answer	Marks
7	Recommend which one of the two strategic options AEV should choose. Justify your recommendation. Your answer must include an evaluation of strategic choice techniques.	20
	Examiner note: Limit to 4 marks EVAL if no evaluation of SC techniques made	
	Examiner reminder: L2 EVAL should be awarded if: some judgement shown in the main body of the answer and an attempt to support conclusion/recommendation, focused on the business in the case OR	
	effective and well supported conclusion/recommendation, focused on the business in the case	
	 Knowledge Knowledge of strategic choice techniques Decision trees Ansoff's matrix Force-field analysis Investment appraisal 	
	 Understanding of relevant factors: ARR – measures return on investment. Higher % the better Lower capital cost will be preferable Lower risk of failure is preferable Lower payback period is preferable Use of AEV's core competencies Understanding of strengths and weaknesses of AEV Understanding of opportunities and threats facing AEV 	
	 Application According to Ansoff's matrix, the joint venture is market development and the truck is product development or diversification Capital cost of Option 2 is \$700 m more than Option 1 Risk of failure is 5% points more for Option 2 than Option 1 ARR of Option 1 is 10% compared to 8% for Option 2 Gearing ratio in 2019 is 55% Use of driving force/constraining force information, e.g. culture clash 	

Question	Answer	
7	 Analysis Establishing a greater presence in Country C through the joint venture would enable an increase in market share in the most important market in the world. This may offer significant potential for future growth Delaying building a factory in country C would enable existing manufacturers to consolidate their position in the market Development of a truck will take longer and significantly more capital than Option 1 increasing pressure on cash flow of AEV Decision tree analysis encourages a logical approach to decision making which can reduce the risk of taking strategic decisions thus reducing the chance of failure Success of AEV in developing battery technology suggests that AEV has the ability to develop the technology further for use in trucks 	
	 Evaluation Supported judgement for either option Identification of most important factor in choosing which option should be chosen, with supporting argument, e.g. capital cost with reference to gearing and cash flow over last year Will shareholders be prepared to wait for returns from Option 2? Ansoff's analysis only considers two main factors – it is important to consider SWOT and PEST to provide a more complete picture Force-field analysis: allocation of numerical figure to driving and constraining forces is subjective and managers may fail to identify all relevant factors Decision tree limitations include the accuracy of the data used and estimates of probability. Does not consider the qualitative factors on a decision Expected returns in a decision tree are average returns are not necessarily the final result 	