
BUSINESS

9609/33

Paper 3 Case Study

October/November 2017

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 2017 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

Question	Answer			Marks																
1	<p>Analyse the benefits to NFP of using critical path analysis when planning the frozen food project. Refer to Appendix 2 in your answer.</p> <table border="1" data-bbox="301 349 1334 786"> <thead> <tr> <th data-bbox="301 349 408 432">Level</th> <th data-bbox="408 349 646 432">Knowledge 3 marks</th> <th data-bbox="646 349 911 432">Application 3 marks</th> <th data-bbox="911 349 1334 432">Analysis 5 marks</th> </tr> </thead> <tbody> <tr> <td data-bbox="301 432 408 584">2</td> <td data-bbox="408 432 646 584">3 marks Good knowledge of CPA</td> <td data-bbox="646 432 911 584">3 marks Good application to NFP</td> <td data-bbox="911 432 1334 584">4–5 marks Good use of theory and/or reasoned argument to explain benefits of using CPA</td> </tr> <tr> <td data-bbox="301 584 408 736">1</td> <td data-bbox="408 584 646 736">1–2 marks Some knowledge shown of CPA</td> <td data-bbox="646 584 911 736">1–2 marks Some application to NFP</td> <td data-bbox="911 584 1334 736">1–3 marks Some use of theory and/or reasoned argument to explain benefits of using CPA</td> </tr> <tr> <td data-bbox="301 736 408 786">0</td> <td colspan="3" data-bbox="408 736 1334 786">No creditable answer</td> </tr> </tbody> </table> <p>Examiner Note: No reward for disadvantage/weaknesses of PA</p> <p>Knowledge:</p> <ul data-bbox="360 920 1276 1133" style="list-style-type: none"> • Definition: Planning technique showing activities, durations, LFTs, ESTs etc. • Helps to ensure all activities are taken in correct sequential order • Can plan to meet deadlines • Helps to speed up project by identifying simultaneous activities • Knowledge of float <p>Application</p> <ul data-bbox="360 1205 1329 1547" style="list-style-type: none"> • Helps to ensure all activities are taken in correct sequential order e.g. installing machinery after it has been delivered. • Helps to speed up project by identifying simultaneous activities e.g. test recipes and refurbish factory • Can plan to meet deadlines e.g. 4 months before the Food Fair as CP is 13 weeks • Critical activities e.g. 3,6,7,10,11 • Can help to ensure deadlines are met e.g. if machine installation takes longer than 2 weeks, time must be saved on subsequent critical activities e.g. first production run <p>Analysis</p> <ul data-bbox="360 1619 1313 1888" style="list-style-type: none"> • Knowledge of float can be useful in managing the project as can identify activities that can be delayed and have resources diverted to critical activities to ensure that deadlines are met. • Use of CPA can help identify when resources are need and thus cut costs as resources not idle waiting to be used • Planning will reduce risk of mistakes as management will have information on appropriate sequence of activities and when they should happen. 			Level	Knowledge 3 marks	Application 3 marks	Analysis 5 marks	2	3 marks Good knowledge of CPA	3 marks Good application to NFP	4–5 marks Good use of theory and/or reasoned argument to explain benefits of using CPA	1	1–2 marks Some knowledge shown of CPA	1–2 marks Some application to NFP	1–3 marks Some use of theory and/or reasoned argument to explain benefits of using CPA	0	No creditable answer			10
Level	Knowledge 3 marks	Application 3 marks	Analysis 5 marks																	
2	3 marks Good knowledge of CPA	3 marks Good application to NFP	4–5 marks Good use of theory and/or reasoned argument to explain benefits of using CPA																	
1	1–2 marks Some knowledge shown of CPA	1–2 marks Some application to NFP	1–3 marks Some use of theory and/or reasoned argument to explain benefits of using CPA																	
0	No creditable answer																			

Question	Answer	Marks																				
2(a)	<p>Refer to Table 1 and other information provided. Calculate the likely change in NFP's annual profit if the dairy farm was closed.</p> <p>Based on full costing</p> <ul style="list-style-type: none"> • Variable feed costs per litre = 8 cents • Dairy farm labour costs per litre = 6 cents [9000/150 000] 1 • Overhead costs allocated to farm = $0.05 \times \text{£}15.6\text{m}/52 = \text{\\$}15\ 000$ per week = 10 cents per litre 2 • Total full cost per litre = 24 cents 3 • Cost of buying in milk = 20 cents • Total cost saving per week = $150\ 000 \times \text{\\$}0.04 = \text{\\$}6000$ 4 • Annual cost saving [additional profit] = $\text{\\$}6000 \times 52 = \text{\\$}312\ 000$ 5 <p>Marginal/contribution costing</p> <ul style="list-style-type: none"> • Cost of buying milk 20 cents. • Variable cost of dairy farm = $0.08 + 0.06 = 0.14$ 2 • Thus, extra contribution of dairy relative to buying milk is 0.06 per lit 4 • So contribution of milk division is really \$9000 per week 5 • So profit would fall by \$468 000 per year if the farm/milk division was closed. 6 	6																				
2(b)	<p>Discuss whether NFP should close the dairy farm, using your answer from <u>2(a)</u> and other information provided.</p> <table border="1" data-bbox="301 1144 1334 1682"> <thead> <tr> <th data-bbox="301 1144 408 1227">Level</th> <th data-bbox="408 1144 596 1227">Knowledge 2 marks</th> <th data-bbox="596 1144 785 1227">Application 2 marks</th> <th data-bbox="785 1144 1139 1227">Analysis 4 marks</th> <th data-bbox="1139 1144 1334 1227">Evaluation 4 marks</th> </tr> </thead> <tbody> <tr> <td data-bbox="301 1227 408 1447">2</td> <td data-bbox="408 1227 596 1447">2 marks Good knowledge shown</td> <td data-bbox="596 1227 785 1447">2 marks Factors well applied to NFP</td> <td data-bbox="785 1227 1139 1447">3–4 marks Good use of theory and/or reasoned argument to explain points for and against closure</td> <td data-bbox="1139 1227 1334 1447">3–4 marks Good judgement shown</td> </tr> <tr> <td data-bbox="301 1447 408 1630">1</td> <td data-bbox="408 1447 596 1630">1 mark Some knowledge shown</td> <td data-bbox="596 1447 785 1630">1 mark Some application of factors to NFP</td> <td data-bbox="785 1447 1139 1630">1–2 marks Some use of theory and/or reasoned argument</td> <td data-bbox="1139 1447 1334 1630">1–2 marks Some judgement shown</td> </tr> <tr> <td data-bbox="301 1630 408 1682">0</td> <td colspan="4" data-bbox="408 1630 1334 1682">No creditable answer</td> </tr> </tbody> </table> <p>Examiner Note: If only use 2(a) or other information limit to L1 AN and EVAL OFR applies</p>	Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks	2	2 marks Good knowledge shown	2 marks Factors well applied to NFP	3–4 marks Good use of theory and/or reasoned argument to explain points for and against closure	3–4 marks Good judgement shown	1	1 mark Some knowledge shown	1 mark Some application of factors to NFP	1–2 marks Some use of theory and/or reasoned argument	1–2 marks Some judgement shown	0	No creditable answer				12
Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks																		
2	2 marks Good knowledge shown	2 marks Factors well applied to NFP	3–4 marks Good use of theory and/or reasoned argument to explain points for and against closure	3–4 marks Good judgement shown																		
1	1 mark Some knowledge shown	1 mark Some application of factors to NFP	1–2 marks Some use of theory and/or reasoned argument	1–2 marks Some judgement shown																		
0	No creditable answer																					

Question	Answer	Marks
2(b)	<p>Knowledge Factors relevant to the decision</p> <ul style="list-style-type: none"> • Contribution costing • Full costing • Profit • Permanence of fixed costs • Issue of suppliers • Impact on brand <p>Application</p> <ul style="list-style-type: none"> • Will market price stay at 20 cents for long? • Other factors: Quality of milk bought in • Positive contribution made of \$9000 per week • OFR allowed e.g. if full costing was used – but credit could be given also for questioning this method later in the answer • Who pays for transport of milk bought in? • Can farm be put to alternate use quickly? Do NFP need that much additional factory capacity? • Chances of planning permission (in beautiful area)? • How much is the land worth? <p>Analysis</p> <ul style="list-style-type: none"> • Analysis of marginal costing approach to making the decision. If farm is closed then the contribution will be lost, therefore there will be a reduction in the profit of the business • If brand image is damaged this may lead to a loss of sales in the future and therefore lower profit • Should not be closed on short term financial grounds as profit would fall (assuming fixed costs still have to be paid) • OR Should be closed as profit will increase if the farm is closed (assuming fixed costs are cut). • How have fixed costs been allocated? Is 5% appropriate given the proportion of total workforce on the farm? <p>Evaluation</p> <ul style="list-style-type: none"> • Marginal costing should really be used as there is no certainty that the allocation of fixed costs to the farm is accurate or that these fixed costs will cease once the dairy farm is closed • Weighing up the factors / Making a justified final conclusion • Depends if any of the fixed costs are clearly specific to the farm • Questioning cost data/costing method used/justifying need for other data 	

Question	Answer				Marks
3	Evaluate the potential risks and rewards to NFP of market development into country Y.				16
Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks	
2	2 marks Good knowledge shown	2 marks Good application to NFP	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 NFP	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown	
0	No creditable answer				
<p>Knowledge</p> <ul style="list-style-type: none"> • International marketing – selling products to another country’s market; • Market development – selling existing products in a new market <p>Application</p> <ul style="list-style-type: none"> • Different consumer tastes (not just an ethnic factor) – are milk based desserts popular in Y? • Risks: different cultures – many more ethnic groups in Y so will NFP’s food products be accepted in that country • Lower GDP per head • Rewards: higher economic growth • Younger population • Not using an agent – no local knowledge • Few competitors 					

Question	Answer	Marks
3	<p>Analysis</p> <ul style="list-style-type: none"> • Different consumer tastes (not just an ethic factor) – are milk based desserts popular in Y? Essential to undertake more rigorous market research into Y's food market • Risks: different cultures – many more ethic groups in Y so will NFP's food products be accepted in that country e.g. meat products might contain beef or meat from animals not killed in a certain way. Could cause major problems with ethic/religious groups which would then make it hard to get established • Lower GDP per head – lower incomes means consumers will not be buying more expensive food products – NFP will have to take this into account with its pricing and promotion decisions • Rewards: higher economic growth – as consumer incomes increase, the demand for income elastic food products (processed foods rather than raw food) might increase • Younger population – likely to be an increasing population which means a potentially growing market • Not using an agent – no local knowledge; contacts with Y's shops will have to be built up by NFP's employees and this will take time • Few competitors – NFP may be able to establish a high market share quickly and will have less price competition. <p>Evaluation:</p> <ul style="list-style-type: none"> • Are rewards potentially greater than risks? In which case this is a wise decision • Are risks greater than rewards? In which case this international market should not go ahead or more research should be undertaken or local agents used to provide local knowledge/contacts. • Justifies case for additional information before final assessment can be made 	

Question	Answer	Marks																								
4(a)(i)	<p>Refer to Table 3 and Appendix 1. Calculate for the first 6 years of the frozen food project.</p> <p>discounted net cash flows</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Net cash flow x discount factor (\$m)</th> <th>Discounted cash flow (\$m)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>-12 x 1</td> <td>-12</td> </tr> <tr> <td>1</td> <td>4 x 0.91</td> <td>3.64</td> </tr> <tr> <td>2</td> <td>4 x 0.83</td> <td>3.32</td> </tr> <tr> <td>3</td> <td>4 x 0.75</td> <td>3</td> </tr> <tr> <td>4</td> <td>5 x 0.68</td> <td>3.4</td> </tr> <tr> <td>5</td> <td>5 x 0.62</td> <td>3.1</td> </tr> <tr> <td>6</td> <td>5 x 0.56</td> <td>2.8</td> </tr> </tbody> </table> <p>2 marks – All correct 1 mark – some idea</p>	Year	Net cash flow x discount factor (\$m)	Discounted cash flow (\$m)	0	-12 x 1	-12	1	4 x 0.91	3.64	2	4 x 0.83	3.32	3	4 x 0.75	3	4	5 x 0.68	3.4	5	5 x 0.62	3.1	6	5 x 0.56	2.8	2
Year	Net cash flow x discount factor (\$m)	Discounted cash flow (\$m)																								
0	-12 x 1	-12																								
1	4 x 0.91	3.64																								
2	4 x 0.83	3.32																								
3	4 x 0.75	3																								
4	5 x 0.68	3.4																								
5	5 x 0.62	3.1																								
6	5 x 0.56	2.8																								
4(a)(ii)	<p>discounted payback period</p> <ul style="list-style-type: none"> • 3 years 7.2 months • 3 years 7 months • Some attempt <p>If actual net cash flows used (3 years) allow 1 mark</p>	<p>3 marks 2 marks 1 mark OFR</p>																								
4(a)(iii)	<p>net present value</p> <ul style="list-style-type: none"> • NPV = 7.26 • Good attempt e.g. \$19.26m • Some idea 	<p>3 marks 2 marks 1 mark OFR</p>																								
4(b)	<p>Discuss whether your results from 4(a) and the other information provided are sufficient to enable NFP's directors to decide whether to proceed with the frozen food project.</p> <table border="1"> <thead> <tr> <th>Level</th> <th>Knowledge 2 marks</th> <th>Application 2 marks</th> <th>Analysis 4 marks</th> <th>Evaluation 4 marks</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>2 marks Good knowledge shown</td> <td>2 marks Factors well applied to NFP</td> <td>3–4 marks Good use of theory and/or reasoned argument</td> <td>3–4 marks Good judgement shown</td> </tr> <tr> <td>1</td> <td>1 mark Some knowledge shown</td> <td>1 mark Some application of factors to NFP</td> <td>1–2 marks Some use of theory and/or reasoned</td> <td>1–2 marks Some judgement shown</td> </tr> <tr> <td>0</td> <td colspan="4">No creditable answer</td> </tr> </tbody> </table>	Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks	2	2 marks Good knowledge shown	2 marks Factors well applied to NFP	3–4 marks Good use of theory and/or reasoned argument	3–4 marks Good judgement shown	1	1 mark Some knowledge shown	1 mark Some application of factors to NFP	1–2 marks Some use of theory and/or reasoned	1–2 marks Some judgement shown	0	No creditable answer				10				
Level	Knowledge 2 marks	Application 2 marks	Analysis 4 marks	Evaluation 4 marks																						
2	2 marks Good knowledge shown	2 marks Factors well applied to NFP	3–4 marks Good use of theory and/or reasoned argument	3–4 marks Good judgement shown																						
1	1 mark Some knowledge shown	1 mark Some application of factors to NFP	1–2 marks Some use of theory and/or reasoned	1–2 marks Some judgement shown																						
0	No creditable answer																									

Question	Answer	Marks
4(b)	<p>Examiner Note: If only use 4(a) or other information limit to L1 AN and EVAL</p> <p>Knowledge</p> <ul style="list-style-type: none"> • Investment appraisal results are an important quantitative technique for selecting projects e.g. against each other or against criteria benchmarks • Discounted payback allows today's money values of net cash flows to be compared with initial capital cost. • Other considerations: <ul style="list-style-type: none"> – Decision tree analysis – Availability of finance – Importance of CPA <p>Analysis</p> <ul style="list-style-type: none"> • DCF 3 years 7.2 months could be considered quick enough in a relatively slow moving industry • NPV positive which shows that in today/s money values the project will be profitable over a 6 year period • ARR is above criterion rate so the project satisfies the NFP minimum for an investment <p>Analysis</p> <ul style="list-style-type: none"> • All results are good – qualitative factors might be positive – some economic growth would increase demand for quality frozen food – if income elastic. • Source of cash flow forecasts not explained and how reliable is the CPA for completion time etc.? • Could industrial relations problems upset the project and make it less successful? More information about union membership etc. • Break-even would have been useful – how big is annual safety margin to allow for lower than expected forecast sales? • Decision tree analysis would have allowed a consideration of risks involved • Qualitative factors include customer taste tests – have these been undertaken and did they like the possible menus? • More detailed market research needed to see what type of products and what type of consumers should be aimed for <p>Evaluation:</p> <ul style="list-style-type: none"> • Recognition of benefits of data provided and investment appraisal results balanced against limitations and gaps • Overall: additional data needs to be explained and justified and overall conclusion drawn regarding sufficiency of data 	

Question	Answer				Marks
5	Evaluate the extent to which the future success of NFP’s operations depends on effective workforce planning.				16
Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks	
2	2 marks Good knowledge shown of workforce planning	2 marks Good application to NFP	4–6 marks Good use of theory and/or reasoned argument	4–6 marks Good judgement shown on importance	
1	1 mark Some knowledge shown of workforce planning	1 mark Some application to NFP	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown on importance	
0	No creditable answer				
<p>Knowledge</p> <ul style="list-style-type: none"> • Definition of workforce planning • Workforce planning helps to ensure the right number of people with the right skills are in the right place at the right time to deliver short- and long-term organisational objectives <p>Application</p> <ul style="list-style-type: none"> • NFP’s operations will require careful workforce planning: <ul style="list-style-type: none"> – Closure of farm – workers re-deployed? – Takeover of VF factory – job losses and/or retraining to operate new machines. – Frozen food project – new workers needed? New skills? Can farm workers be retrained? – Labour turnover of IT employees. <p>Analysis</p> <ul style="list-style-type: none"> • If no workforce planning then: labour shortages can occur – which will hold back production and limit NFP’s ability to increase profits; employees may be over worked; key employees may not be replaced. • Alternatively, excess labour might be employed [e.g. after integration of VF] which raises costs and again limits ability to increase profits • New skills needed – if IT workers are not retained or if VF workers are not retrained then production/productivity will be low. <p>Evaluation:</p> <ul style="list-style-type: none"> • Essential as NFP are involved in several significant changes and have clear aim to raise profits • Future success also driven by careful/effective strategic choice e.g. risks of product and market development expansion might lead to losses • External factors might be just as important e.g. increase in interest rates could make the frozen food project unprofitable. • Sian’s leadership style could also be a real issue influencing NFP’s success despite effective workforce planning. 					

Question	Answer				Marks
Both Q6 and Q7 use this marking grid:					
Level	Knowledge 3 marks	Application 3 marks	Analysis 4 marks	Evaluation 10 marks	
3				7–10 marks Excellent judgement shown e.g. in both conclusion and arguments used	
2	3 marks Good knowledge shown e.g. Q6: 2 SA techniques	3 marks Good application to NFP	3–4 marks Good use of theory and/or reasoned argument	4–6 marks Good evaluation – e.g. strong conclusion but arguments used contain little judgement	
1	1–2 marks Some knowledge shown e.g. Q6: just one SA technique	1–2 marks Some application to NFP	1–2 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown e.g. attempted conclusion	
0	No creditable answer				

Question	Answer	Marks
6	<p>Evaluate <u>two</u> strategic analysis techniques that NFP should use when considering future strategic options.</p> <p>Examiner Note: If only one strategic analysis technique limit to L1 AN and EVAL</p> <p>Knowledge</p> <ul style="list-style-type: none"> • Strategic analysis is analysing the business and the environment in which it operates before choosing between strategic options • SWOT – will help to identify internal strengths) and internal weaknesses and external threats and opportunities • PEST (PESTLE) – external environment also important • Establishing core competencies • Porters 5 forces – competitive rivalry • Boston Matrix – for analysis of product portfolio linked to market share and market growth <p>Application</p> <ul style="list-style-type: none"> • SWOT – will help to identify internal strengths (brand image, quality products) and internal weaknesses (trying to do too much at same time?) and external threats (many competitors in country X) and opportunities (fewer competitors in country Y) • PEST (PESTLE) – e.g. ageing population; relatively slow economic growth and technology introducing new machines • Establishing core competencies; food processing • Porters 5 forces – competitive rivalry: large number of competitors in country X; small producers can enter food processing market with limited capital • Boston Matrix – little information available apart from large % of food products are processed products in country X <p>Analysis</p> <ul style="list-style-type: none"> • PEST (PESTLE): Ageing population important for product portfolio choice and workforce planning; relatively slow economic growth limits expansion of many businesses if they focus just on domestic market and technology introducing new machines requires IT skills and problems of retention of staff in past • Establishing core competencies – NFP seem to have (wisely?) not considered moving away from food processing and possible sale of farm suggest that food processing is more significant than food production. Sian has vision of making NFP one of largest food processing companies in country X. Link could be made to takeover of VF. • Boston Matrix: is total market expanding or not? Need data on individual food markets – e.g. is market for frozen food growing or not? 	20

Question	Answer	Marks
6	Evaluation: <ul style="list-style-type: none">• Likely to be in the form of justifying why one or more methods of strategic analysis is important in this case – using evidence from the case.• Answers might explain why one particular aspect of analysing the business or its environment is more important than others.• All forms of strategic analysis have problems e.g. can be subjective and may become outdated quickly• The specific limitations of the SA techniques selected should be assessed and, possibly, compared• Boston Matrix of limited use by itself	

Question	Answer	Marks
7	<p>Discuss how NFP’s senior management could effectively implement its strategy of integrating the VF business into NFP.</p> <p>Knowledge</p> <ul style="list-style-type: none"> • Strategic implementation is putting strategy into effect to achieve organisation’s aims • Reference to techniques that could be used e.g. <ul style="list-style-type: none"> – Project champions – Contingency planning – Training – Communication – Involvement of staff – Resources <p>Application</p> <ul style="list-style-type: none"> • Issues include: poor communication so far with employees – will this increase or reduce the risk of industrial disputes • Employees could lose jobs or need to be retained – resistance to these changes is likely – how could NFP reduce resistance and make employees positive towards change? Communication? Shared vision? Methods of motivation to encourage cooperation? • Culture change needed – away from “good value” and “low cost” to NFPs good image – need to change senior management and ensure an ethical code is adopted and observed? • Dealing with future crises such as food contamination will be an essential part of this assimilation. <p>Analysis</p> <ul style="list-style-type: none"> • NFP need to assimilate VF into its organisation as soon as possible to avoid conflicts/disputes and low production levels in order to achieve aim of making higher profits • Need to update factory and install new machines – is CPA forecast correct in terms of timing? <p>Evaluation:</p> <ul style="list-style-type: none"> • Likely to be focused on the “most important” factors that will determine whether VF can be incorporated quickly into NFP – need for justification of this based on case evidence. • Sian’s leadership style might be a serious problem – lack of openness and willingness to allow participation are not good signs and are the opposite of most “change management” techniques. 	20