

Cambridge International AS & A Level

BUSINESS

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Paper 3 Case Study 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 2021 series for most Cambridge IGCSE[™], Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **21** printed pages.

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.

Social Science-Specific Marking Principles (for point-based marking)

1	•	mponents 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 b	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) DO credit alternative answers/examples which are not written in the mark scheme if they are correct							
	С	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 <i>n</i> reasons (e.g. State two reasons).							
	d e	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.) DO NOT credit answers which are obviously self-contradicting or trying to cover all							
	f	possibilities 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	Pre	esentation 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).							
3	Ca	culation 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.

Question	Answer					
1	-	e the advantages to F idustries.	F of the privatisation	of the electricity and	10	
	Level	Knowledge 3 marks	Application 2 marks	Analysis 5 marks		
	2	3 marks Two or more relevant points made about benefits	2 marks Points made are applied to FF	3–5 marks Good use of theory to explain benefits		
	1	1–2 marks One or two relevant points made about benefits	1 mark Some application to FF	1–2 marks Some use of theory to explain benefits		
	0		No creditable content			
	own Advanta Con Qua Trai resp age	atisation is the conversion lership. ges npetition should reduce atracts should ensure c ality and certainty of su nsparency should incre- bonsive to customers a ncies.	ompanies meet their c	ommitments. usinesses are more		
	sup Pric Glas - - Refe milli	of government privatis ply which should mean es have risen in water sses manufacture: Water required to prod Electricity to run mach been interrupted as a erence to capacity of 1 on frames or other rele	nines in glasses manufa state-owned business 6 million frames and a evant figures from the t ed on time; electricity a	ions. he rate of inflation. acture. Supply has ctual output of 14 ext.		

Question	Answer	Marks
1	 Analysis Developing chains of argument that use the above points to draw out an implication or a consequence for FF. Prices have risen in water and electricity above the rate of inflation, increasing costs for FF. Privatisation may increase competition and drive down prices which will lower costs to FF and increase profit. Improvement in reliability of supply should enable FF to increase capacity utilisation, reduce downtime and improve percentage of ontime deliveries. This will improve customer satisfaction and increase sales. FF is investing in 3D printers and CAD/CAM so a more reliable electricity supply will be increasingly important to the success of FF. 	
	ARA	

Question	Answer	Marks
2(a)(i)	Refer to Table 1 and other information. Assume that Total Quality Management (TQM) is implemented successfully. Calculate the:	3
	capacity utilisation	
	Note: units not required for full marks	
	Capacity utilisation = current output level / maximum output level X 100 (1 mark if no relevant calculation)	
	Production increases 10% to 14 X 1.1 = 15.4m (1)	
	Capacity utilisation = 15.4 / 16 X 100 (2)	
	= 96.25% or 96.3% (3)	
	Or if calculation with no increase 14 / 16 X 100 = 87.5% (2)	

Question	Answer	Marks
2(a)(ii)	increase in contribution per unit.	3
	Note: units not required for full marks	
	contribution per unit = selling price – unit variable cost (1 mark if no relevant calculation)	
	original unit contribution 40 – 20 = \$20 (1)	
	unit variable cost falls by 5%: 20 X 0.05 = \$1	
	new unit variable cost = 20 – 1 = \$19 (1)	
	40 - 19 = new unit contribution of 21 (2)	
	Increase in contribution per unit = 1 (3)	
	OR Increase in contribution per unit = 5% (3)	
	OFR	

Question			Answer			Marks	
2(b)	Evaluate whether total quality management (TQM) is sufficient to solve FF's production problems.						
	Level	Knowledge 2 marks	Application 2 marks	Analysis 3–4 marks	Evaluation 3–4 marks		
	2	2 marks Two or more relevant points	2 marks Application of two or more points to FF	3–4 marks Good use of theory and/or reasoned argument	3–4 marks Good judgement shown		
	1	1 mark One relevant point made	1 mark Some application to FF	1–2 marks Some use of theory and/or reasoned argument	1–2 marks Some judgement shown		
	0		No credita	ble content			
	OFR from	n 2(a) and (b) ap	plies.				
	 Qua stan TQM qual - Applicat Effect Glass emp High Only Emp Prote 	ity relates to whe lity assurance is dards at each sta d is an approach ity improvements quality chains, qu customers and k :ion ct on capacity uti ses frame manu loyees only invol reject level by w \$5% of sales de loyees know reject lems with raw m	uality circles, zero aizen. lisation and unit of facture and nine ved in one task a /holesalers (7%). elivered on time. ected frames can aterials supplies.	eing and meeting to ensure custo ns to involve all e o defects, concep cost in FF. stages of produc it present. be recycled.	g quality mer satisfaction. employees in		
	UnreIncre	akdowns with ma eliable electricity easing employee er productivity.	supply.	nigher absence ra	ates, complaints,		
	emp • TQM proc • Deliv hold • Raw	lity chains and in loyees will be un 1 makes explicit t ess so decrease very times likely t up production.	ternal customers willing to accept the need for qual s likelihood of po to be lowered or i s will be more clo materials will ento	sub-standard iter ity assurance thr or work. met more often a osely checked wl	ms. oughout the s fewer rejects nen delivered, so		

Question	Answer	Marks
2(b)	 Evaluation Elements that the evaluation/judgement might depend on: Change to TQM incurs costs especially of training which in short term may offset any quality improvement. Change to TQM requires change in supervisors' approach. How possible is this? Does Chang have the skills needed to get employees on board? As well as TQM there may need to be management training to facilitate the culture change. TQM can only succeed if training is given to all employees. Other possibilities exist to reduce production problems, e.g. paying a bonus for achieving target wastage rates. These may be more appropriate for FF and cheaper. Judgement as to whether TQM will be sufficient to solve production problems. 	

Question			Answei			Marks
3	Evaluate the most effective way that FF's directors could improve communication between line managers and employees.					16
	Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks	
	2	2 marks Two or more relevant points	2 marks Application of two or more points to FF	4–6 marks Good use of theory and/or reasoned argument	4–6 marks Good judgement shown	
	1	1 mark One relevant point made	1 mark Some application to FF	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown	
	0		No credita	ble content		
		could focus on m ture of these.	ethods, channels	s, barriers or role	of management	
	peo Cor mes Met – – – – For One com Ver • Rela cen • Bar – – – • Rela cen • Bar – – • Cer • Sup • Cer	ective communica ple, with feedbac mmunication meth ssages hods of communi Spoken Visual Written Electronic mal (official comm e-way (sender to not munication tical v horizontal of ation of communic tralisation riers to communic Physical reasons Poor attitudes of tion ear glasses-frame pervisor gives detain nated working – momunication	k nods are the med ication nunication netwo receiver with no f communication cation to delegati cation s, e.g. noise sender and/or re sender and/or re ailed instructions making, one-way any employees v	ia used to comm rks) v informal co eedback) v two-v on, control, autho eceiver , one person has v communication vork alone and re	ommunication vay ority, trust, one task and targets esults in informal	
	refle • Em	satisfaction of em ected in absence ployees find it diff erence to propose	rates and production in the second seco	tivity hanges with line		

Question	Answer	Marks
3	 Analysis More two-way communication including meeting with employees to allow Q&A will ensure employees understand changes being introduced and make it more likely they will be accepted. Introducing team working will reduce the isolation of employees and therefore improve horizontal communication. It may also facilitate improved vertical communication as line managers can communicate with the team through a team leader. Cell production may increase feelings of belonging and result in motivation which could reduce labour turnover and absenteeism. Newsletters could disseminate necessary information to employees and improve employee awareness of changes. However, employees may not read the newsletter, and this is a one-way form of communication. Involving employees in decisions may improve communication but will potentially slow down decision-making, so FF less flexible to a changing marketplace. Evaluation Elements that the evaluation/judgement might depend on: Changes such as the proposed introduction of team working need to be thoroughly planned Conflicts exist between, for example, control and trust, authority and responsibility. These relationships must be explained and thought through Importance of involving employees at all levels Attitude of managers and employees will be important to success of any change. Culture of the business will impact success of changes Justified conclusion on most effective way Factors necessary for successful implementation of communication changes 	

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Question		l	Answer		Marks		
4(a)(i)	Refer to Tables 2 and 3. Calculate the:						
	payback period						
	Note: units not required for full marks						
	Payback = time tak	en to recoup ini	tial cost (1 mark if no relevant c	alculation)			
	2.4 / 2.6 X 12 = 11	months OR 2.4	/ 2.6 X 365 = 337 days				
	= 3 years and 337	days or 3 years	and 11 months or 3.92 years (2	2)			
	Evidence of a cum	ulative net cash	flow (1)				
	Year	Net cash flow	Cumulative net cash flow				
	0	(10.2)	(10.2)				
	1	2.6	(7.6)				
	2	2.6	(5)				
	3	2.6	(2.4)				
	4	2.6	0.2				
	4 years or during y	ear 4 (1)					
4(a)(ii)	accounting rate o	f return (ARR)			3		
	Note: units not requ	uired for full mar	ks				
	ARR = average pro calculation)	ofit / original inve	estment cost X 100 (1 mark if no	o relevant			
	Profit = 10.4 – 10.2	2 = 0.2 (1)					
	Average annual pro	ofit = 0.2 / 4 = 0.	05 (2)				
	0.05 / 10.2 X 100 =	0.49% (3)					
	Alternative formula relevant calculation		/ average investment X 100 (1 i	mark if no			
	= 0.05 / 5.1 = 0.989	% (3)					

Question	Answer	Marks
4(a)(iii)	net present value (NPV).	3
	Note: units not required for full marks	
	NPV is the value today of future cash flows net of the original investment (1 mark if no relevant calculation)	
	Y0(10.2)Y1 2.6 x .952 = 2.4752 Y2 2.6 x .907 = 2.3582 Y3 2.6 x .864 = 2.2464 Y4 2.6 x .823 = 2.1398	
	Any correct discounted cash flow (1)	
	Net cash flows Y1 – Y4 = \$9.2196m	
	NPV = 9.2196 – 10.2 (2)	
	NPV = (0.9804) \$m (3)	
	Allow for rounding in the discounted cash flows	
	OFR	

Question	Answer							
4(b)	You may refer to your answers to 4(a) and any other information.							
		nend whether Floommendation.	F should invest	in buying 3D pr	inters. Justify			
	Level	Knowledge 2 marks	Application 2 marks	Analysis 3–4 marks	Evaluation 3–4 marks			
	2	2 marks Two or more relevant points	2 marks Application of two or more points to FF	3–4 marks Good use of theory and/or reasoned argument	3–4 marks Good judgement shown			
	1	1 mark One relevant point made	1 mark Some application to FF	1–2 marks Some use of theory and/or reasoned argument	1–2 marks Some judgement shown			
	0 No creditable content							
	 ARR NPV Payl Gen Factors i Com Avai Gea Impa Pace Applicat Glas Reco 4–6- 5% t Almo Train 	ge of investment a profitability of y – profit conside back – how quick eric reference to n investment dec petition lability of finance ring act on quality e of technologica tion ses (glasses) fra- ent availability of year life span arget rate of retu- post a 4-year pays	ring the time valu (ly the investmen short/long/high/lo cisions including o l change in this ir ame manufacture 3D printers, untr arn v ARR of only back loyee cost reduct	e of money t cost is returned ow results and im qualitative factors ndustry ied technology 0.49%	nportance			
		•	ring obtaining 3D ee costs of \$2.1m					

Question	Answer	Marks
4(b)	 Analysis Application of investment appraisal techniques results to decision, e.g. payback is just inside life span and ARR is positive so indicate invest but NPV negative indicates not invest. 3D printer will increase flexibility of FF to respond to changing consumer tastes. Greater variety of designs possible to be supplied quickly to meet customer demands resulting in an increase in sales implications of advantages and disadvantages for aspects of FF operation. Appraisal factors including: greater quality in terms of delivery time leading to increased sales as well as reduce costs disruptive to present production methods and could be more costly than predicted. Reduction in labour costs may mean that employees will be made redundant causing a negative impact on employee morale. There may be resistance from employees to introduction of the 3D printers resulting in an increase in costs. 3D printers may increase technical economies of scale reducing production costs and making FF more price competitive. 	
	 Evaluation Elements that the evaluation/judgement might depend on: Investment appraisal indicates do not invest as NPV negative and payback and ARR marginal and below the 5% required. Significance of the Directors' required rate of return. Non-financial factors may outweigh this. Accuracy of the assumptions used to calculate the discount rate and cost changes. Data only based on a four-year appraisal. Why not postpone the decision for a year or two and see if printer costs fall or wait for new process innovations to become available? Is the investment appraisal data complete? Cost savings shown but no consideration of impact of the technology on sales. Uncertainties in whether delivery times will improve, the cost of training and acquiring skilled employees outweighs the greater flexibility, less waste and fewer employees or vice versa. How important is it for FF to be at the forefront of new technology? Being in the lead may enhance reputation, attract skilled employees and lead to further cost falls and/or more contracts. Starting now could pay dividends in the future as it becomes more widespread. 	

Question			Answer			Marks
5	Evaluate the importance to FF of following the product development process before adding metal glasses frames to its product range.					16
	Level	Knowledge 2 marks	Application 2 marks	Analysis 6 marks	Evaluation 6 marks	
	2	2 marks Two or more relevant points	2 marks Application of two or more points to FF	4–6 marks Good use of theory and/or reasoned argument	4–6 marks Good judgement shown	
	1	1 mark One relevant point made	1 mark Some application to FF	1–3 marks Some use of theory and/or reasoned argument	1–3 marks Some judgement shown	
	0		No credita	ble content		
	 Concept development and testing, e.g. product features, methods of manufacture, cost to produce Business analysis, e.g. availability of finance and other resources Product testing, e.g. developing a prototype Test marketing Commercialisation Benefits of R&D Keeping up with trends and anticipating new trends 					
	 Competitiveness Product differentiation Reference to Ansoff's Matrix can be rewarded. 					
	 Com FF no frame Curre Plast Invol[*] Frame 	ses frames and t petitors have R& eeds new skills a es ently FF produce ic and metal frar vement of lens n	D departments b and equipment to s what wholesale nes nanufacturer ed to wholesalers	design and man ers ask for		

Question	Answer	Marks
5	 Analysis Product development requires things that FF does not have at present: R&D department employees with research skills and aptitudes acquiring these may be expensive and take time. Market research can provide useful information and help avoid mistakes and time wasting. Market research provides criteria for development. Test marketing provides a cost effective way of gaining consumer feedback and assessing the viability of a new product before launch. This reduces the chances of failure as products can be changed in light of feedback. Product development process includes consideration of availability of finance and other resources which will increase chances of successful development. FF's core competency is making glasses frames. Product development succeeds if core competencies are linked to customers and market requirements. Supportive managers and executives facilitate product development which is not immediately producing income. Evaluation Elements that the evaluation/judgement might depend on: No indication of budget available – this is essential and must be adequate Requires a positive high-level commitment from Directors 	
	 Funding for an R&D department and/or encouraging existing designers by payment or time is essential Thorough market research is essential to ensure marketability 	
	Marketing department must be involved in setting the parameters for research and development	

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Question		Answ	er	Marks	
Questions 6 and 7 use this marking grid:					
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 FF	
2	3 marks Good understanding shown	3 marks Good application to FF	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 FF OR effective and well supported conclusion/ recommendation focused on FF	
1	1–2 marks Some understanding shown	1–2 marks Some application to FF	1–3 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 FF	
0		No credi	table content	1	

Question	Answer	Marks	
6	Evaluate the strategic choice techniques FF's directors could use when making the decision whether to enter the Asia Pacific retail glasses market.	20	
	Note: This is not which method of entry to the new market should be chosen.		
	 Knowledge Meaning of strategic choice as part of strategic management Strategic choice techniques such as Ansoff Matrix, Decision trees, Force Field Analysis and investment appraisal (IA) Ansoff encourages management to consider risk of each option Force Field Analysis considers driving and restraining factors, giving each one weighting according to importance. Totals are then compared Decision trees analysis assesses estimated monetary values of options, based on probabilities of success and failure IA techniques such as payback, ARR, and NPV compare time taken to recover investment and future value and return on projects Other qualitative factors, such as the attitude of management to risk Reference to strategic analysis techniques when preparing for choice such as SWOT, PEST, Boston matrix, Porter's Five Forces, Core competencies Application Glasses manufacture, lenses change to selling direct to retail companies Current market selling to wholesalers Glasses and frames markets in other parts of the world Proposal seems to be from one person (CEO) Strategic analysis carried out but no details, no objectives set Use of Tables 4 and 5, for instance, the Asia Pacific region shows the based on the state of the parts of the state of the st		
	highest sales (\$14bn) and 10% estimate for sales growth 2021–2025 Analysis		
	 Ansoff suggests that this would be a product development, as now selling glasses not just frames and also a market development as FF would be selling to retailers. Decision tree support a new direction with an EMV \$14m for Asia Pacific approach, higher than Europe and N America at \$4m and \$3m respectively. Table 5 indicates any of the regions appropriate but Asia Pacific good choice, FF will know local markets as located there. 		
	 Choice needs to be part of strategic management process, strategic analysis techniques, such as SWOT, PEST, Porter's Five Forces, would have led to this choice. Suggested choice will be expensive, are funds available? Relies on making good relationships with suppliers, especially lens manufacturers, to ensure efficiency of operations. Relies on successful strategy for entering an international market. 		

Question	Answer	Marks
6	 Evaluation Supported conclusion based on reasoning, e.g. more research, or considers another option. Proposal seems a preliminary suggestion, not a fully researched proposal. Proposal not integrated with other possible changes. Does the analysis justify a need for a new direction? No objectives set means difficult to carry out strategic analysis. No objectives set means no criteria to enable a strategic choice or judge its success. No details of how Ansoff and decision tree were researched, so difficult to know how valid the conclusions of each are. No details on supply chains or entry strategy so vital information lacking. Other techniques, e.g. investment analysis, not used. Comments on relative importance of techniques. 	

Question	Answer	Marks
7	Evaluate the importance of change management techniques to the successful introduction of team working at FF.	20
	 Knowledge Explanation of organisation culture: The values at work in an organisation or 'the way things are done around here'. Explanation of role of change culture: The readiness to react to the dynamic business environment by flexibility and the ability to change products and processes. Explanation of change management techniques, such as how employees might be kept informed and persuaded not to resist change. Place of strategic implementation in strategic management/planning. Reference to organisation structural relationships between line managers and subordinates. Team working and cell production. Application Description of current glasses frame production process and proposed changes. Increasing employee dissatisfaction and absence rates, caused by poor communication with line managers and how team working could improve this. 	
	 Specific possible improvements to lead-time, productivity, inventory and quality levels, such as importance of improving 7% reject rate. How team working may operate in this glasses production process, for example, making a team responsible for one design. 	
	 Analysis Explanation of culture type in FF (probably task) and how this impacts operations Explanation of new culture type – entrepreneurial? And how this might fit in with team working Need for positive change culture and management as big change planned and it will be important to get employees 'on board' Suggested appropriate techniques for change management, for example, working on two-way communication, use of project champions Mismanaging the change could be detrimental to the positives in FF Chang is a key figure in managing change Demotivated employees might make the change relatively difficult 	
	 Evaluation Recommendation on managing the change supported by reasoning Evaluation of likely success of techniques Demotivated employees might make use of techniques more important Use of techniques should reinforce employee motivation, but will depend on type and attitude of employees Ranking usefulness of techniques in FF's situation Techniques are last phase of strategic management and this process must be carried out well for techniques to be effective Need for contingency planning as part of process to manage unforeseen events, such as complete failure of power supply for a long period of time, given current unreliability 	