

**Business management**  
**Higher level**  
**Paper 1**

Friday 27 April 2018 (afternoon)

2 hours 15 minutes

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**Instructions to candidates**

- Do not open this examination paper until instructed to do so.
- A clean copy of the **business management case study** is required for this examination paper.
- Read the case study carefully.
- A clean copy of the **business management formulae sheet** is required for this examination paper.
- Section A: answer two questions.
- Section B: answer question 4.
- Section C: answer question 5.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[60 marks]**.

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## Section A

Answer **two** questions from this section.

1. (a) With reference to **Table 2**, describe **two** advantages for Su of using a cash-flow forecast. [4]
- (b) With reference to Su and her managers at *HH* and *AS*, explain the differences between leadership and management. [6]
2. (a) With reference to *AK Bank*, describe **two** features of for-profit microfinance providers. [4]
- (b) Su is considering two possible locations for the production facility (lines 51–52). Explain the factors (reasons) that Su may consider when deciding between the two locations. [6]
3. (a) Describe **two** advantages for *AS* of using cellular manufacturing in the production of its solar power systems. [4]
- (b) Explain the advantages for Su of forming *AS* as a private limited company. [6]

Turn over

## Section B

Answer the following question.

4. It is now mid-2019. Production of solar power systems has been going for over a year and sales have exceeded forecasts and reached 5000 systems for the year. Profits have been reinvested into developing new outlets and distribution channels for solar power systems in Afghanistan. Lean production techniques have enabled AS to keep costs low, but AS has had some quality issues: some cells produce lower quality systems than others. AS has found faults in components bought from suppliers. Some solar power systems have been damaged in the supply chain. Salima is thinking of instituting total quality management (TQM). She also needs to forecast sales for 2020 but has decided the situation is not suitable for a four-part moving average.

In a separate development, *Doorway Foundation (DF)*, a multibillion-dollar charity established by the owners of one of the world's largest IT businesses, has approached Su. The foundation has a major IT initiative to bring IT to schools in Afghanistan, Myanmar and Bangladesh. By forming a joint venture, *DF* could use *AS*'s expertise and local knowledge to help solve some of the electricity supply and IT problems in Afghanistan.

The possibility of a joint venture encouraged managers and investors to think about whether *AS* should grow. In response, Su decided to analyse the possibility of growth through change using a force field analysis of *AS*.

[Source: © International Baccalaureate Organization 2018]

**(This question continues on the following page)**

(Question 4 continued)

**Table 3: Force field analysis for growth through change at AS**

Driving forces	Su's score		Restraining forces	Su's score
Su wants to widen the scope of the social enterprise	5	Growth through change	Possible diseconomies of scale from growing	4
Team of volunteers keen to make even more of a difference	3		Resistance to change	2
Businesses need to grow	1		Su does not want to neglect Afghanistan project	4
Opportunities to be taken in other Asian countries	2		Su has already put a great deal of finance into the business	2
Opportunities to develop new products	2		Worldwide economic recession affecting <i>HH</i>	3
Clear needs for help beyond Afghanistan	3		Quality issues need to be solved first	1
Su still feels a need to make a difference	5		Might not get further financial support	2
Possibility of bringing in new ideas from external recruitment	2		Too much responsibility for Su	3
All stakeholders share Su's enthusiasm for progress so far	3		External recruitment may cause problems	1
			The business is already high risk	2

[Source: © International Baccalaureate Organization 2018]

- (a) Define the term *four-part moving average*. [2]
- (b) With reference to AS, explain the difference between commercial marketing and social marketing of the solar power systems (line 53). [4]
- (c) Explain how total quality management (TQM) could help AS improve the quality of its products. [4]
- (d) Using information from the case study, additional information from pages 4 and 5 and appropriate business tools, discuss the value to Su of the force field analysis in deciding whether to grow through change. [10]

**Turn over**

## Section C

Answer the following question.

5. Su is considering two options.

### Option 1: The joint venture

If *AS* goes ahead with the joint venture in 2019, there will be consequences it will need to face. *DF* would have majority ownership in the joint venture, provide most of the senior managers, and is likely to expect changes in the way *AS* operates. *AS* would have to significantly increase the production of solar power systems and would have to restructure. Some managers may lose influence over decisions. Su is worried that her Afghanistan project (*AS*) would take second place.

Having a close working relationship with *DF* would reduce *AS*'s risk of failure. Employees at *AS* have heard rumours about the joint venture and are unhappy with the idea. They fear a loss of identity, being overwhelmed by a much larger organization and possibly losing their jobs. Su is concerned that resistance to change, particularly by employees and managers, is going to be an important consideration in the decision. However she sees the situation as a huge opportunity to make a real change in young people's lives.

*AS* would invest \$1 million. The net cash inflows to *AS* (ignoring inflows to *DF* and before deduction of the investment cost) are forecast to be \$0.4 million per year, giving a net present value (NPV) at 6% discount rate of \$0.68 million and a payback of two years and six months. Su gives the project a life of five years.

### Option 2: Diversification into biomass

The research and development section of *AS* has developed a portable electricity generation system based on biomass, a biomass power system (BPS), as an alternative to solar power systems. A new factory costing \$3 million will be needed. BPS will be particularly useful to those communities that keep cattle – the dung\* produced provides the fuel for BPS. Su has assembled some relevant information.

[Source: © International Baccalaureate Organization 2018]

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\* dung: animal waste from the cattle

(This question continues on the following page)

(Question 5 continued)

**Table 4: Information relevant to the BPS project**

<b>Start</b>	<b>Mid-2019</b>
Likely level of BPS sales per year	10 000 (target level of sales)
Likely payback period	Four years
Accounting rate of return (ARR)	13.3%
Probable net present value (NPV)	+\$1.04 million
Impact on sales of solar power systems	Not known
Location of factory	One idea is to locate in Afghanistan
Employment created	100 new jobs
Risk	High

[Source: © International Baccalaureate Organization 2018]

Using the case study, additional information on pages 6 and 7 and appropriate planning tools, recommend whether Su should choose Option 1, Option 2, or neither. You will find it useful to calculate the ARR for Option 1.

[20]