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**Business management**  
**Standard level**  
**Paper 1**

Friday 3 May 2019 (afternoon)

1 hour 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.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[40 marks]**.

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## Section A

Answer **two** questions from this section.

1. (a) With reference to *RDM*, describe how changes in operations management altered its relationship with **two** other business functions. [4]
- (b) Explain how *RDM*'s transformation of its manufacturing process from traditional mass production to highly automated production affected the interests of internal stakeholders. [6]
2. (a) With reference to *RDM*, outline **one** advantage **and one** disadvantage of Jan's leadership style (lines 88–89). [4]
- (b) Explain how innovation at *RDM* may have influenced their marketing practices. [6]
3. (a) Describe **two** changes in the external environment that have affected *RDM*. [4]
- (b) Explain how the methods used to motivate employees could have changed when *RDM* transformed from traditional mass production to highly automated production [6]

## Section B

Answer the following question.

4. While identifying a location for the new factory, *Zylstra Industries (ZI)*, a large manufacturing company located not far from Location A, presented *RDM* with another possibility: a strategic alliance. Thus, *RDM* have two options to consider.

**Option 1:** Purchase land and build a new automated factory. The potential location is summarized in **Table 1**.

**Table 1: Information on Location A**

	Location A
<b>Cost of land, construction, and \$6 000 000 in equipment</b>	\$64 000 000
<b>Skills of workforce</b>	Low
<b>Access to large markets</b>	Centrally located near highly profitable markets
<b>Expected 5-year profit</b>	\$80 000 000 (\$16 000 000 per year for 5 years)
<b>ARR</b>	<b>X</b>
<b>Payback</b>	<b>Y</b>
<b>Annual payments to mortgage lender if financed with debt</b>	\$2.6 million

Location A is in an economically depressed area of northwestern Europe, where land values nevertheless remain high. Location A has an old industrial tradition with a long tradition of poor industrial/employee relations.

**Option 2:** A ten-year strategic alliance with *ZI*. *ZI* has proposed that *RDM* uses some of its vacant manufacturing space in exchange for assistance in transforming *ZI*'s manufacturing process into a highly automated one using robots. Twenty *RDM* engineers and computer scientists would:

- transform *ZI*'s current factory into an automated one
- train *ZI* engineers
- monitor the factory for the duration of the strategic alliance.

*ZI* would pay all capital expenditures and *RDM* would employ the twenty engineers and computer scientists. Average salary and other financial rewards of one highly skilled employee would be \$150 000 per year. In exchange, *RDM* would get free usage of factory floor space. *RDM* would buy its own equipment at a cost of \$6 000 000.

*RDM* estimates that leasing space similar to what *ZI* is offering would cost \$3 000 000 a year.

[Source: © International Baccalaureate Organization 2019]

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

**(Question 4 continued)**

- (a) State **two** reasons for selecting a specific location for production. [2]
- (b) Using the information in **Table 1**, calculate for **Location A**:
- (i) the payback period (*show all your working*); [2]
- (ii) the average rate of return (ARR) (*show all your working*). [2]
- (c) Explain **two** types of financial rewards, **other than** salary, that *RDM* might offer its engineers and computer scientists. [4]
- (d) Recommend whether *RDM* should choose **Option 1** or **Option 2**. [10]
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