

© International Baccalaureate Organization 2022

All rights reserved. No part of this product may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without the prior written permission from the IB. Additionally, the license tied with this product prohibits use of any selected files or extracts from this product. Use by third parties, including but not limited to publishers, private teachers, tutoring or study services, preparatory schools, vendors operating curriculum mapping services or teacher resource digital platforms and app developers, whether fee-covered or not, is prohibited and is a criminal offense.

More information on how to request written permission in the form of a license can be obtained from <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organisation du Baccalauréat International 2022

Tous droits réservés. Aucune partie de ce produit ne peut être reproduite sous quelque forme ni par quelque moyen que ce soit, électronique ou mécanique, y compris des systèmes de stockage et de récupération d'informations, sans l'autorisation écrite préalable de l'IB. De plus, la licence associée à ce produit interdit toute utilisation de tout fichier ou extrait sélectionné dans ce produit. L'utilisation par des tiers, y compris, sans toutefois s'y limiter, des éditeurs, des professeurs particuliers, des services de tutorat ou d'aide aux études, des établissements de préparation à l'enseignement supérieur, des fournisseurs de services de planification des programmes d'études, des gestionnaires de plateformes pédagogiques en ligne, et des développeurs d'applications, moyennant paiement ou non, est interdite et constitue une infraction pénale.

Pour plus d'informations sur la procédure à suivre pour obtenir une autorisation écrite sous la forme d'une licence, rendez-vous à l'adresse <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

© Organización del Bachillerato Internacional, 2022

Todos los derechos reservados. No se podrá reproducir ninguna parte de este producto de ninguna forma ni por ningún medio electrónico o mecánico, incluidos los sistemas de almacenamiento y recuperación de información, sin la previa autorización por escrito del IB. Además, la licencia vinculada a este producto prohíbe el uso de todo archivo o fragmento seleccionado de este producto. El uso por parte de terceros —lo que incluye, a título enunciativo, editoriales, profesores particulares, servicios de apoyo académico o ayuda para el estudio, colegios preparatorios, desarrolladores de aplicaciones y entidades que presten servicios de planificación curricular u ofrezcan recursos para docentes mediante plataformas digitales—, ya sea incluido en tasas o no, está prohibido y constituye un delito.

En este enlace encontrará más información sobre cómo solicitar una autorización por escrito en forma de licencia: <https://ibo.org/become-an-ib-school/ib-publishing/licensing/applying-for-a-license/>.

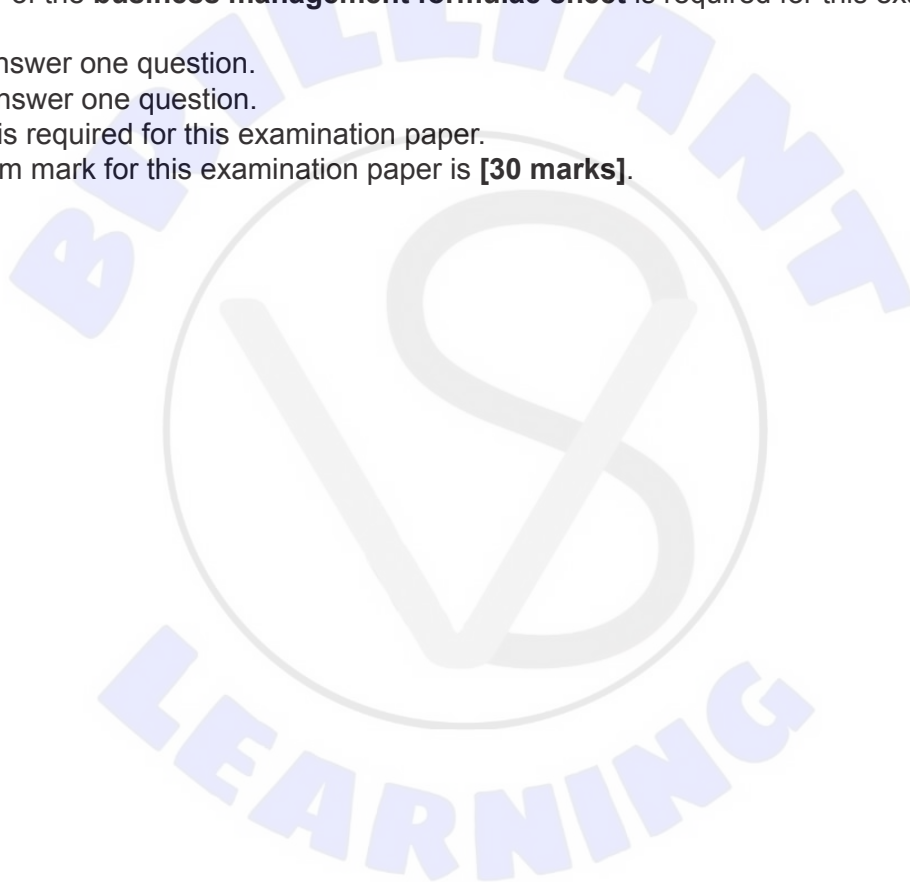
Business management
Standard level
Paper 2

Friday 29 April 2022 (morning)

1 hour 15 minutes

Instructions to candidates

- Do not open this examination paper until instructed to do so.
- A clean copy of the **business management formulae sheet** is required for this examination paper.
- Section A: answer one question.
- Section B: answer one question.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[30 marks]**.



Section A

Answer **one** question from this section.

1. AXL

AXL has two factories, in which it manufactures aluminium cans for the soft drinks industry. AXL has a maximum production capacity of 80 million cans per year.

Table 1: AXL's forecasted sales revenue and costs for 2023

Output (millions)	Total fixed costs (\$m)	Total variable costs (\$m)	Total revenue (\$m)
0	5.0	0	0
10	5.0	0.5	1.5
20	5.0	1.0	3.0
30	5.0	1.5	4.5
40	5.0	2.0	6.0
50	5.0	2.5	7.5
60	5.0	3.0	9.0
70	5.0	3.5	10.5
80	5.0	4.0	12.0

AXL plans to close its two factories and move production to a new, larger factory to obtain economies of scale.

In the first six months of 2022, increased competition led to a fall in AXL's sales. For the final two months of 2022, AXL plans to increase the trade credit period it offers to customers from 30 to 60 days.

- (a) Define the term *economies of scale*. [2]
- (b) Using **Table 1**, calculate:
- (i) the contribution per unit (*show all your working*); [2]
- (ii) the break-even level of output (*no working required*). [1]
- (c) If AXL produces 75 million cans in 2023, using **Table 1**, calculate:
- (i) the margin of safety (*no working required*); [1]
- (ii) the profit (*show all your working*). [2]
- (d) Explain the potential impact on AXL if it implements its planned increase in trade credit period. [2]

2. Ritev Enterprises (RE)

Ritev Enterprises (RE) is a public limited company that owns a chain of 20 gas (petrol) stations. Next year, *RE* plans to modernize its gas stations by installing self-service pumps.

Table 2 provides selected financial data for *RE* from:

- the profit and loss account for year ending 31 May 2021
- the balance sheet as of 31 December 2021.

Table 2: Selected financial data for RE

	\$m
Accumulated retained profit	5
Cash	1
Cost of goods sold	80 000
Creditors	6
Dividends	1
Expenses	185
(Net) fixed assets	50
Long-term liabilities	15
Overdraft	1
Sales revenue	100 000
Share capital	29
Stock	5

The finance director is concerned about the trend in consumer preference for electric cars and the potential impact of increased numbers of electric cars on *RE*.

- (a) State **two** appropriate external sources of finance that *RE* could use to modernize its gas stations. [2]
- (b) (i) Construct a fully labelled balance sheet for *RE* as of 31 December 2021. [5]
- (ii) Calculate *RE*'s gross profit margin (*no working required*). [1]
- (c) Explain the potential impact of the increasing popularity of electric cars on *RE*'s costs **and** revenues. [2]

Turn over

Section B

Answer **one** question from this section.

3. Hums Athletics (HA)

Hums Athletics (HA) manufactures running shorts, sweat shirts, and sports bras. Operating only in the secondary sector, *HA* has a head office and three manufacturing facilities, one for each product. These are located in its home country in Europe. Labour costs are high. The quality of labour is excellent.

HA produces goods under its own *HA* brand, which it sells to wholesalers. *HA* also manufactures for other sportswear companies. *HA* puts the other sportswear companies' logos on the running shorts, sweat shirts, and sports bras. Sales to other sportswear companies are an important revenue stream for *HA*.

HA has many levels of hierarchy. Managers at each level have a narrow span of control, and the company is organized by product. *HA*'s management believe that these features of organizational structure ensure product quality, which they view as essential for brand loyalty.

The sportswear manufacturing industry is becoming more competitive. Some foreign manufacturers have begun using penetration pricing to gain market share. For three years, none of *HA*'s revenue streams have increased, despite increasing unit sales. *HA*'s gross and net profit margins have declined. However, its sales have increased for the last three years. *HA* has had to raise additional external finance to increase production.

In response to the increasing competition, *HA* is considering two options:

- **Option 1:** Outsourcing some of its manufacturing overseas.
- **Option 2:** Entering the rapidly growing online business-to-consumer (B2C) retail market.

Market research has shown that consumers increasingly expect to buy online.

- (a) State **two** ways in which market share can be measured. [2]
- (b) Draw an organization chart for *HA*. [4]
- (c) Explain:
- (i) the impact of price changes by foreign competition on *HA*'s break-even point; [2]
- (ii) why *HA* had to raise additional external finance to increase production. [2]
- (d) Recommend whether *HA* should choose **Option 1** or **Option 2**. [10]

4. Red Squirrel Apple Juice (RS)

Red Squirrel Apple Juice (RS) is a cooperative of apple farmers. *RS* was named after the red squirrel, whose population is declining because of growing numbers of grey squirrels. Originally from North America, grey squirrels are aggressive and take over red squirrels' habitats. *RS*'s founders thought that the red squirrel would be a good symbol to reverse the declining popularity of traditional apple juice due to consumer preference for high-sugar American-style beverages. With the symbol, *RS* aimed to appeal to environmentally aware and health-conscious consumers.



Originally, *RS* only sold apple juice in bulk to beverage companies. These companies bottle the juice and sell it under their own labels. *RS* requires these companies to place *RS*'s logo of a red squirrel on their labels. Although *RS* only sells to a small number of beverage companies, its logo is on juice bottles in stores across the country.

Awareness of the *RS* brand grew. The cooperative's managers recently opened another channel of distribution: direct sales of bottled juice to consumers at the cooperative's processing plant. *RS* charges lower prices than stores. The new channel of distribution required capital expenditure for bottling equipment and additional revenue expenditure. *RS* experienced increased labour and promotion costs, which some farmers complained about.

In recent decades, *RS*'s home country has experienced rising anti-immigrant sentiment. Some politically motivated organizations have begun to use images of red squirrels to symbolize this sentiment, so some beverage companies no longer want to use *RS*'s logo on their labels.

Some of *RS*'s stakeholders are concerned.

- (a) State **two** features of a cooperative. [2]
- (b) With reference to *RS*, explain the importance of branding. [4]
- (c) With reference to *RS*, explain the difference between capital expenditure **and** revenue expenditure. [4]
- (d) Discuss **two** possible areas of conflict between the interests of *RS*'s stakeholders. [10]

Turn over

5. Frez PLC (FR)

Frez PLC (FR) has 6000 employees in its 100 supermarkets and 250 in its head office. *FR* operates a 360-degree feedback appraisal system for head office employees. *FR*'s directors believe that this system has improved retention and morale of head office employees. This year, to reduce head office costs, *FR* offered head office employees the option of teleworking, which 60% accepted. They will work at the head office only one day per month.

Each *FR* supermarket has 10 departments. Departmental managers have concerns about their workload caused by their large span of control. Labour turnover at *FR* supermarkets is increasing each year because departmental managers are leaving. In January, *FR* increased its supermarket opening hours and hired an additional 1000 part-time employees. *FR* is considering extending its 360-degree feedback appraisal system to all supermarket employees.

Recently, demand from supermarket shoppers for a home delivery service increased, although industry experts disagree on whether this demand will continue. *FR*'s main competitors already provide delivery services.

FR has decided to launch a home delivery service. It will require 500 vans, which would be replaced every five years. *FR* is considering two options:

- **Option 1:** purchase the vans at a unit cost of \$34 000 each, financed by a five-year bank loan at 3% interest.
- **Option 2:** Lease the vans at a unit cost of \$13 000 per year per van. The minimum term for the lease will be 24 months.

FR already borrowed \$50 million in 2019 to finance the modernization of its supermarkets.

- (a) State **two** features of a public limited company. [2]
- (b) (i) Explain, with reference to Maslow's motivation theory, how teleworking may damage employee motivation at *FR*'s head office. [2]
- (ii) Explain **one** disadvantage for *FR*, **other than** the impact on employee motivation, of introducing teleworking. [2]
- (c) Explain **two** disadvantages for *FR* if it extends its 360-degree feedback appraisal system to its supermarket employees. [4]
- (d) Recommend whether *FR* should choose **Option 1** or **Option 2**. [10]

References:

© International Baccalaureate Organization 2022