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Business management
Higher level
Paper 2

30 April 2026

Zone A morning | **Zone B** morning | **Zone C** morning

Session number

1 hour 45 minutes

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Instructions to students

- Write your session number in the boxes above.
- 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 all questions.
- Section B: answer one question.
- Answers must be written within the answer boxes provided.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[50 marks]**.



Section A

Answer **all** questions in this section. Answers must be written within the answer boxes provided.

1. Best Yachts (BY)



Best Yachts (BY) manufactures yachts using lean production. *BY* recently won an award for one of its models, *Speed*, and plans to open a new factory.

BY requires a long-term loan of \$1.5 million to finance the building of the new factory. *BY* has equity of \$2 million. Non-current liabilities would increase to \$5.5 million if *BY* received the loan. Interest rates are currently very low but are predicted to increase in the next year.

Table 1 shows *BY*'s forecasted net cash flows for the new factory.

Table 1: Forecasted net cash flows for the new factory for the first five years

Year	Annual net cash flow (\$)
1	240 000
2	300 000
3	390 000
4	440 000
5	390 000

(a) State **two** features of lean production.

[2]

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(This question continues on the following page)



(Question 1 continued)

(b) Using **Table 1** and the other information provided:

(i) calculate the payback period for the new factory (*show all your working*); [2]

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(ii) calculate the gearing ratio if *BY* receives a loan of \$1.5 million for the new factory (*show all your working*). [2]

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will not be marked.



(Question 1 continued)

- (c) Complete **Table 2** by calculating the present value for the new factory for the first five years, using a discount rate of 4 %.

Table 2

Year	Net cash flow (\$)	Discount rate at 4%	Present value (\$)
1	240 000	0.9615	
2	300 000	0.9246	
3	390 000	0.8890	
4	440 000	0.8548	
5	390 000	0.8219	
			Total:

Using your completed **Table 2**, calculate the net present value (NPV) for the new factory for the first five years (*no working required*).

[2]

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 Net present value (NPV): \$

- (d) Explain **one** disadvantage for *BY* of using the net present value (NPV) method to decide whether to build the new factory.

[2]

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2. Victoria Events (VE)

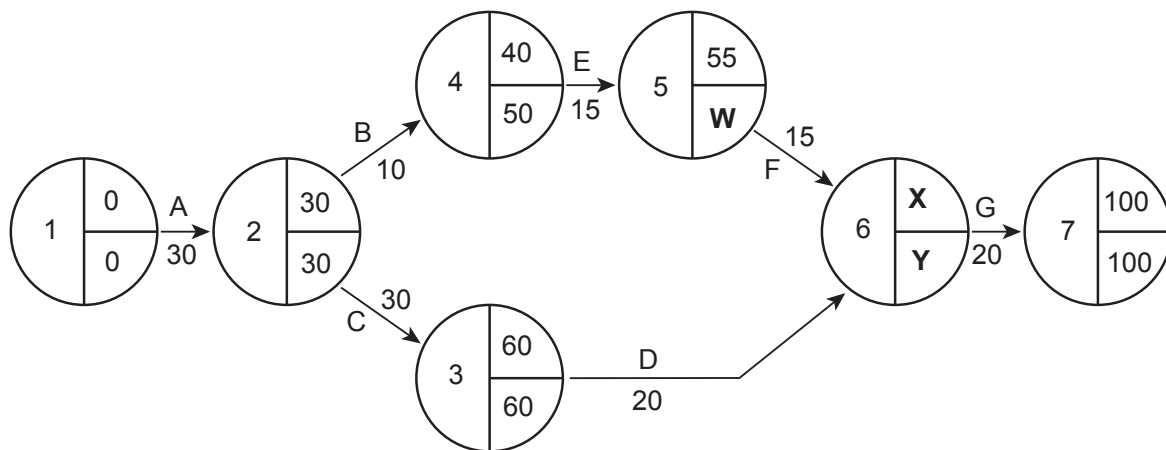
Victoria Events (VE) is a privately held company that organizes wedding parties. Worldwide celebrity, Kaila Kardash, has recently hired *VE*. Victoria Bloom, *VE*'s chief wedding party planner, is in charge of Kaila's wedding party project and has prepared a list of activities and the number of days for each to be successfully completed (see **Table 3**).

Table 3: Activities for planning Kaila's wedding party, with estimated completion times

Activity	Description	Required time (in days)
A	Book venue	30
B	Choose theme and colour	10
C	Hire food and drink suppliers	30
D	Hire musician and photographer	20
E	Design venue decorations	15
F	Hire florist	15
G	Send invitations	20

Victoria has completed activities A to D. However, Kaila is unsure about the decorations for the venue (activity E) and wants her sister to be involved in the design. She suggested that Victoria delay this activity for eight days. **Figure 1** shows the critical path diagram for Kaila's wedding party project.

Figure 1: Critical path diagram for Kaila's wedding party project



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(Question 2 continued)

- (a) State **two** features of a privately held company. [2]

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- (b) Using information in **Table 3**, calculate the missing values **W**, **X** and **Y** on the critical path diagram in **Figure 1** (*no working required*). [3]

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- (c) Using **Figure 1**:

- (i) calculate the total float for activity E (*show all your working*); [2]

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- (ii) determine the critical path for Kaila's wedding party project. [1]

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(Question 2 continued)

- (d) Explain whether the completion date for Kaila’s wedding party project will be delayed if the earliest starting time (EST) for activity E is delayed by eight days. [2]

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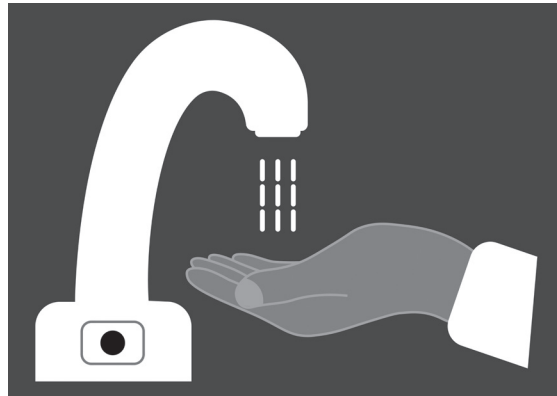
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3. Water Save (WS)



In response to Country X's water shortage, environmental engineer Sergio Fernandez founded *Water Save (WS)*. He designed and patented an innovative faucet (tap) equipped with a sensor that stops water flow when there is no hand movement below the faucet. *QFHotels* has ordered an initial 1200 faucet units to be supplied over three months. A business angel invested \$40 000 in *WS*. However, *WS* requires additional capital to generate orders from other businesses in a competitive environmental marketplace. Sergio has forecasted the figures shown in **Table 4** for *WS* for the first four months of operations.

Table 4: Forecasted figures for *WS* for the first four months of operations

Sales revenue from <i>QFHotels</i> (\$45 per unit)	Received in month 3
Business angel investment	\$40 000 in month 1
Raw materials (\$12 per unit)	Payable in month 3
Patent fee	\$12 000 payable in month 1
Machinery and equipment	\$8000 payable in month 1
Utilities	\$550 per month
Sergio's salary	\$8000 per month
Insurance	\$850 per month

- (a) State **two** advantages of working with a business angel **other than** financial investment. [2]

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(Question 3 continued)

(b) Using **Table 4**, prepare a cash-flow forecast for *WS* for the first four months of operations. [6]

All financial figures are in \$	Month 1	Month 2	Month 3	Month 4

(c) Explain **one** reason why Sergio patented his innovative faucet. [2]

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Section B

Answer **one** question from this section. Answers must be written within the answer boxes provided.

4. Reina Jabones (RJ)



Reina Jabones (RJ) is a publicly held company that manufactures laundry detergents for washing clothes. *RJ* is the market leader for laundry detergents in Country Y, with a 55 % market share. *RJ*'s products include powder detergents and liquid detergents.

(a) State **two** features of a publicly held company.

[2]

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(Question 4 continued)

Rey, *RJ*'s most popular powder detergent, has been on the market for 25 years. *RJ* uses competitive pricing. Competitors offering similar powder detergents to Rey set their prices low, decreasing their profit margins. Rey's prices are slightly below competitors' prices. Rey is a high-quality product. Its unit production costs are low due to economies of scale; however, profit margins for Rey are lower than for *RJ*'s other products.

- (b) Explain **one** advantage **and one** disadvantage for *RJ* of using competitive pricing for Rey.

[4]

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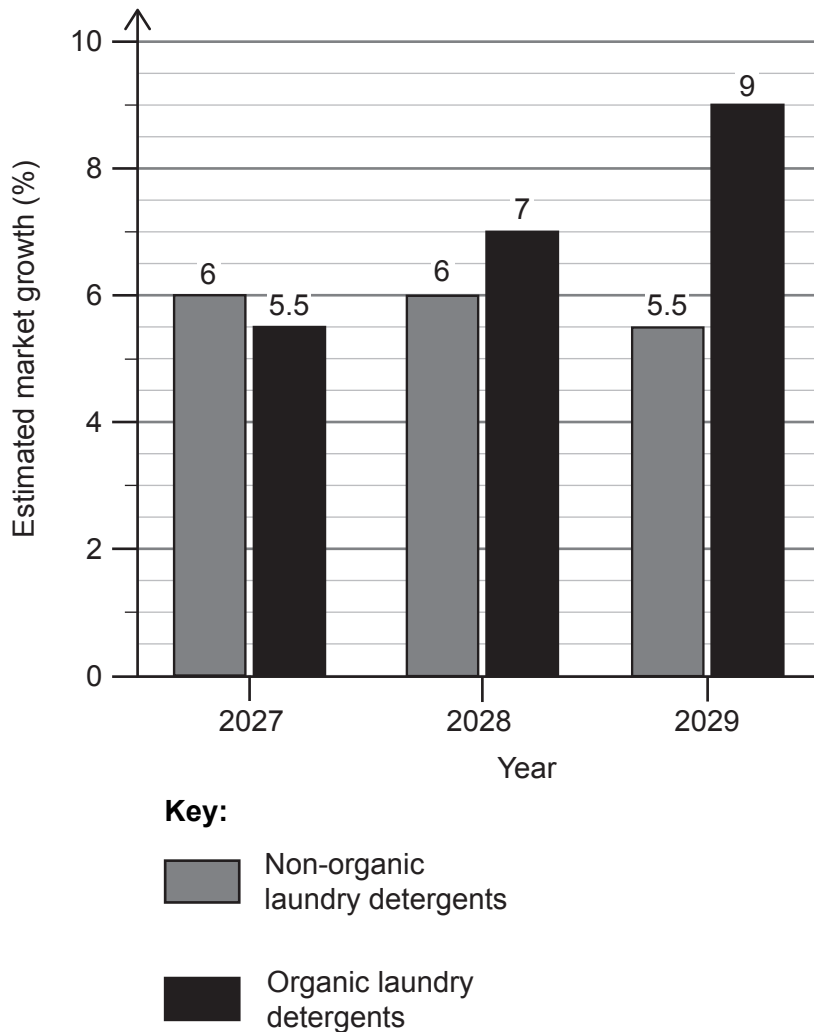
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(Question 4 continued)

RJ recently launched two organic (free from artificial chemicals) laundry detergents made from plants. *RJ* is the only company in the market currently offering organic laundry detergents. *RJ* consulted secondary research on the market growth of organic and non-organic laundry detergents in Country Y for the next three years (see **Figure 2**).

Figure 2: Estimated market growth rate of organic and non-organic laundry detergents in Country Y, 2027–2029



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(Question 4 continued)

- (c) Using data from **Figure 2**, comment on the estimated market growth for organic **and** non-organic laundry detergents in Country Y for 2027–2029. [2]

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RJ's product portfolio has four brands:

- Rey and Sol, *RJ*'s powder detergents, which operate in a slow-growing market. Rey is profitable and has a 65 % market share for powder detergents. *RJ* recently reduced Sol's price and updated its packaging, but Sol's sales continue to fall. Sol has a 16 % market share for powder detergents.
- CocoX and EcoX, *RJ*'s new organic liquid detergents, which sell at premium prices. Sales of both products are growing rapidly. The two products together have an 80 % market share of liquid detergents. *RJ*'s advertising expenses for CocoX and EcoX are high.

- (d) Complete the Boston Consulting Group (BCG) matrix (**Figure 3**) for *RJ*'s four brands. [2]

Figure 3: *RJ*'s Boston Consulting Group (BCG) matrix

		Market share	
		High	Low
Market growth	High		
	Low		

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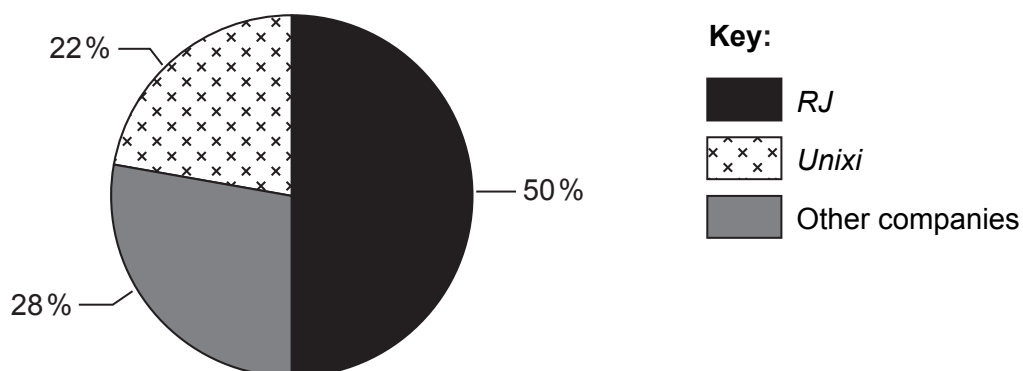
(Question 4 continued)

Unixi Ltd. a multinational company, recently entered the laundry detergent market in Country Y. *Unixi* offers several products, including organic detergent tablets that it claims are three times more efficient than liquid and powder detergents. *Unixi* invests heavily in research and development (R&D). *RJ*'s chief executive officer (CEO), Pedro Piazza, became worried about *Unixi*'s entry into the market and requested a brand loyalty survey (see **Table 5**) and updated market share data (see **Figure 4**). Among other things, the data showed that *RJ*'s market share had decreased by 5 %.

Table 5: Results of *RJ*'s brand loyalty survey

		%		%		%
How long have you been buying <i>RJ</i> 's laundry detergents?	Less than a year	10	1–4 years	20	More than four years	70
How would you rate your overall satisfaction with <i>RJ</i> 's laundry detergents?	Satisfied	65	Neutral	25	Dissatisfied	10
What factor would make you change to another laundry detergent brand?	Lower price	40	Better detergent quality	45	Discounts & special offers	15
How likely are you to continue buying <i>RJ</i> 's laundry detergents?	Very likely	50	Neutral	30	Unlikely	20

Figure 4: Laundry detergent market share by company



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(Question 4 continued)

- (e) Using **Table 5**, **Figure 4** and other information in the stimulus, discuss how *Unix*'s entry into the laundry detergent market might affect *RJ*'s position as a market leader. [10]

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5. **Brilliance Games (BG)**

Brilliance Games (BG) is a publicly held company that develops online video games. A group of engineers started *BG* and achieved worldwide success with their video game *X-Dragons*. In April 2024, *BG* was the victim of cybercrime, as a result of which the personal data of its customers was stolen from *BG*'s network. *BG* faced legal action from customers and was fined.

- (a) State **two** examples of cybercrime **other than** the theft of personal data. [2]

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BG stores data in its own data centre located at its head office. Data centre maintenance costs are \$450 000 per year. *BG* needs to upgrade its data centre at an estimated cost of \$2.5 million. As an alternative, *BG* is considering an external cloud computing service at a cost of \$400 000 yearly. *BG* will rely on this external provider to store all data, including confidential information. Cloud computing providers continuously invest in the latest technology. Cloud computing requires a fast, stable internet connection.

- (b) Explain **one** advantage **and one** disadvantage for *BG* of using a cloud computing service. [4]

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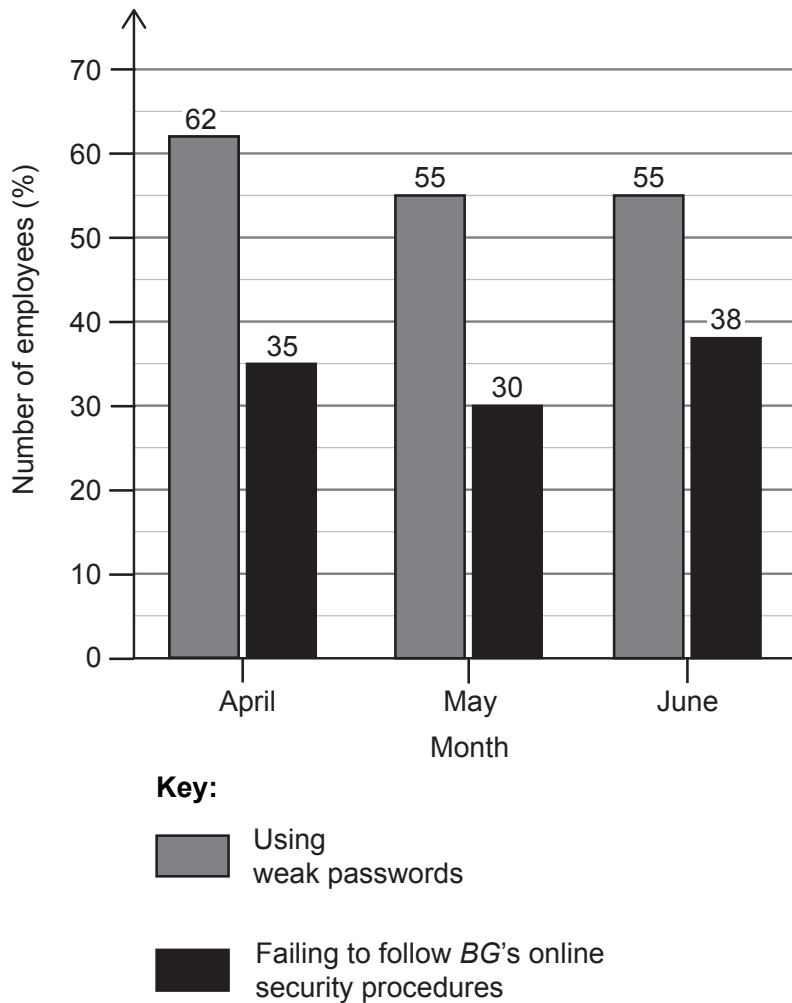
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(Question 5 continued)

BG's information technology (IT) director, Jim Cooper, was convinced that human error caused the cybercrime incident in April 2025. For three months, Jim collected data on *BG*'s employees to identify reasons that may have exposed *BG*'s network to the cybercrime. The results of his data collection, which identified the two most common human errors at *BG* related to cybersecurity, are shown in **Figure 5**.

Figure 5: Two most common human errors at *BG* related to cybersecurity, April–June 2025



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(Question 5 continued)

- (c) Using data from **Figure 5**, comment on Jim’s data collection.

[2]

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After analysing the data, Jim proposed on-the-job training in cybersecurity for all *BG* employees. Senior engineers will deliver the training, which will take place one afternoon per week for six weeks. However, *BG* plans to launch a new game with a forecasted monthly revenue of \$200 000, development of which is already behind schedule. *BG* will have to pay employees extra for the additional hours worked and recruit more engineers.

- (d) Explain **one** disadvantage for *BG* of conducting on-the-job training for all employees.

[2]

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BG took too long to respond to the cybercrime incident and did not recover the stolen personal data. The cybercrime cost *BG* \$3.5 million in fines. *BG*'s brand image was eroded, and it lost 15% of its share value. If another cybercrime incident occurred, the fines would triple. Jim drafted a contingency plan for *BG*'s board of directors, which is shown in **Table 6**. *BG* will need additional finance to cover the costs for the plan.

Table 6

Action	Forecasted result	Forecasted costs (\$ millions)	Forecasted completion time
Establish a chain of command and train employees	Reduce cybercrime response time by 20 %	1.5	6 weeks
Design a data recovery plan	Recover stolen data	0.5	3 months
Data centre upgrade	Increase network security and data storage capacity	2.5	6 months

- [10]

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1. [image of yacht] PaulVinten, 2016. *Luxury private motor yacht sailing at sea - stock photo*. [image online] Available at: <https://www.gettyimages.co.uk/detail/photo/luxury-private-motor-yacht-sailing-at-sea-royalty-free-image/503692962> [Accessed 23 April 2025]. Source adapted.
3. [image of hand washing] Kolomiiets Iryna, 2021. *Hands washing under the faucet with sensor. Touch less color water crane with hand. Motion water tap. Sterile surface. Automatic hand wash faucet icon. Vector - stock illustration*. [image online] Available at: <https://www.gettyimages.co.uk/detail/illustration/hands-washing-under-the-faucet-with-sensor-royalty-free-illustration/1311624676> [Accessed 23 April 2025]. Source adapted.
4. [image of laundry detergent] Lugowski, D., 2024. *Person adding washing powder to the washer, close up. Female hand holding laundry powder – stock photo*. [image online] Available at: <https://www.gettyimages.co.uk/detail/photo/person-adding-washing-powder-to-the-washer-close-up-royalty-free-image/2004750073> [Accessed 4 July 2025]. Source adapted.

