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Business management
Higher level
Paper 2

1 May 2024

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

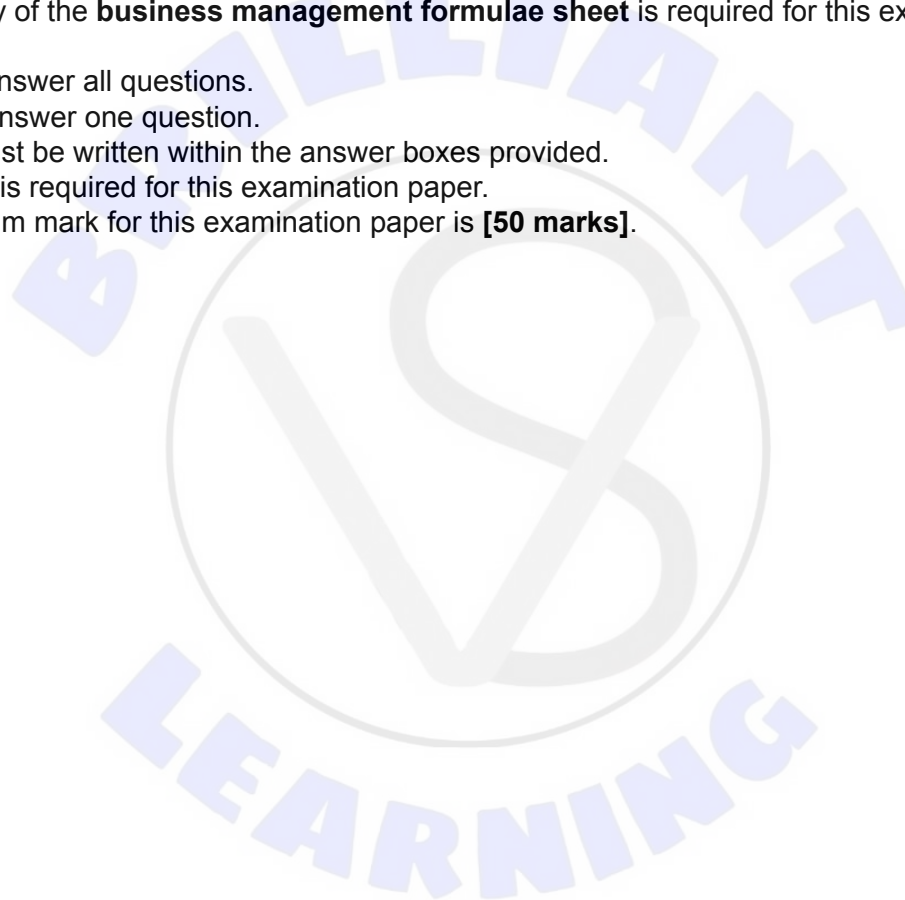
Candidate session number

1 hour 45 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 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.

1. Medias Calentitas (MC)

Medias Calentitas (MC) is a cooperative that produces luxury woollen socks. *MC*'s socks have unique patterns, and they are knitted with luxury cashmere* wool. *MC*'s machinery, valued at \$100 000 on start-up, has a useful life of 10 years and an estimated residual value of \$30 000.

MC has set a target profit of \$47 000 for 2025. The demand for *MC*'s socks is price inelastic.

Selected financial information for *MC* is shown in **Table 1**.

Table 1: Selected financial information for MC

Price per pair of socks	\$40
Variable cost per pair of socks	\$30
Fixed costs per year	\$70 000
Maximum production capacity per year	11 000 pairs

* cashmere: a type of luxury wool obtained from some breeds of goat

(a) State **two** features of a cooperative. [2]

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(b) Using straight-line depreciation, calculate *MC*'s total annual depreciation expense for its machinery (*show all your working*). [2]

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(Question 1 continued)

(c) Using **Table 1**, calculate:

(i) the number of pairs of socks *MC* needs to sell to achieve an annual target profit of \$47 000 (*show all your working*); [2]

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(ii) the price *MC* must charge to achieve a target profit of \$47 000, assuming it will sell 9750 pairs of socks per year (*show all your working*). [2]

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(d) Explain **one** advantage for *MC* of the demand for its socks being price inelastic. [2]

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2. Universal E-Bikes Ltd. (UEB)

Universal E-Bikes Ltd. (UEB) manufactures electric bicycles as a sustainable form of urban transport. *UEB*'s research and development department's innovative design obtained a patent.

To increase output and improve the quality of its bicycles, *UEB* invested in modernizing its factory. The investment included developing innovative software to customize orders, purchasing battery production machinery, and introducing manufacturing robots.

Table 2 shows *UEB*'s expected net cash flows for a period of four years.

Table 2: Expected net cash flows from *UEB*'s modernized factory (all figures in millions of \$)

Year	Net cash flow
0	-3
1	0.75
2	1.00
3	1.10
4	1.15

(a) Define the term *patent*.

[2]

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(b) Using information from **Table 2**, calculate, for *UEB*'s modernized factory:

(i) the payback period (*show all your working*);

[2]

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(Question 2 continued)

(ii) the average rate of return (ARR) (*show all your working*).

[2]

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(c) Complete **Table 3** by calculating the present value for *UEB's* modernized factory for the first four years, using a discount rate of 6%.

Table 3

Year	Net cash flows in millions of \$	Discount rate at 6%	Present value in millions of \$
1	0.75	0.9434
2	1.00	0.8900
3	1.10	0.8396
4	1.15	0.7921
			Total:

Using your completed **Table 3**, calculate the net present value (NPV) for *UEB's* modernized factory for the first four years (*show all your working*).

[2]

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Net present value (NPV): \$

(d) Many economists have forecast that interest rates are going to rise.

Explain how an increase in interest rates could impact your answer to part (b)(ii) **or** (c).

[2]

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3. Sol Market (SM)

Sol Market (SM) is a 120-room tourist hotel in Portugal.

The hotel manager, Cristiano, wishes to increase room bookings in the quieter months (November–February). In the busy months, capacity utilization (number of rooms booked) is almost 100%.

In the quieter months, *SM* uses cost-plus (mark-up) pricing.

Cristiano created a budget, which is shown in **Table 4**.

Table 4: SM's budget for November 2023 to April 2024

(A) = Adverse variance

(F) = Favourable variance

Month	Average daily rooms booked			Average room rate (€)	Daily change in revenue variance (€)	Days per month	Monthly change in revenue variance (€)
	Budgeted figures	Actual figures	Variance				
Nov 2023	23	22	1 (A)	60	60 (A)	30	1800 (A)
Dec 2023	17	18	1 (F)	60	60 (F)	31	1860 (F)
Jan 2024	22	19	3 (A)	60	180 (A)	31	5580 (A)
Feb 2024	30	27	3 (A)	60	180 (A)	29	5220 (A)
Mar 2024	60	55	5 (A)	100	500 (A)	31	15 500 (A)
Apr 2024	75	76	1 (F)	150	150 (F)	30	X
Six-month change in revenue variance							Y

(a) Define the term *cost-plus (mark-up) pricing*.

[2]

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(This question continues on the following page)



(Question 3 continued)

(b) Using information from **Table 4**, calculate:

(i) the **actual** average capacity utilization for *SM* in December 2023
(*show all your working*); [2]

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(ii) the monthly change in revenue variance for April 2024, **X**, and state whether it is adverse or favourable (*show all your working*); [2]

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(iii) the total six-month (November 2023–April 2024) change in revenue variance, **Y**, and state whether it is adverse or favourable (*show all your working*). [2]

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(c) Explain **one** method that *SM* could use to improve capacity utilization in the quieter months. [2]

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Section B

Answer **one** question from this section.

4. Avuela PLC (AV)

Avuela PLC (AV), a public limited company, is a low-cost airline that offers cheap flights in South America. *AV* operates all over the continent flying to small cities and remote areas. Its target market is travellers who like difficult-to-reach destinations. *AV* charges \$5 for each 20-kilogram piece of luggage, a charge that is 80% lower than luggage charges from its competitors. *AV*'s customer satisfaction and brand loyalty are strong. *Backpackers* magazine named *AV* the customers' favourite airline for five years in a row.

(a) Define the term *target market*.

[2]

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AV employs only 50 pilots, of which 20 are captains. Each of *AV*'s flights has two pilots: the captain, with overall responsibility for flight safety and punctuality, and a first officer, who is less experienced. Captains also carry out the training of first officers.

AV's fleet of aircraft is one of the oldest in the region. The maintenance director recently said, "Unless new aircraft are purchased or leased, it is likely that safety issues may occur." Several captains have resigned. The pilots' union is in conflict with *AV* and argues that:

- flying into remote and secluded airports is dangerous and stressful
- salaries are below the industry average
- captains should be better paid for training first officers.

AV plans to recruit pilots externally to fill the captains' vacancies. *AV* will hire an agency to manage the recruitment process, which will take six months. Some of *AV*'s first officers are expressing strong interest in applying for the vacancies.

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(Question 4 continued)

(b) Explain **one** advantage **and one** disadvantage for AV of recruiting captains externally. [4]

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New low-cost airlines offering discounts and loyalty programmes are entering the South American market. AV now faces some challenges:

- It relies on low prices to sell tickets.
- Its customer database is limited, and data collected is not used.
- It wants to develop a customer loyalty programme but lacks experience.

(c) Explain **one** advantage **and one** disadvantage for AV of creating a customer loyalty programme. [4]

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FL, a European airline that operates internationally, wants to increase its operations in South America. It has a modern aircraft fleet and numerous highly qualified departments including human resources (HR), marketing, IT, and safety and security. FL has a customer loyalty programme, but its customer satisfaction is low. FL does not deal with customer complaints successfully, and flight cancellations and delays are above the industry average.

(This question continues on the following page)



(Question 4 continued)

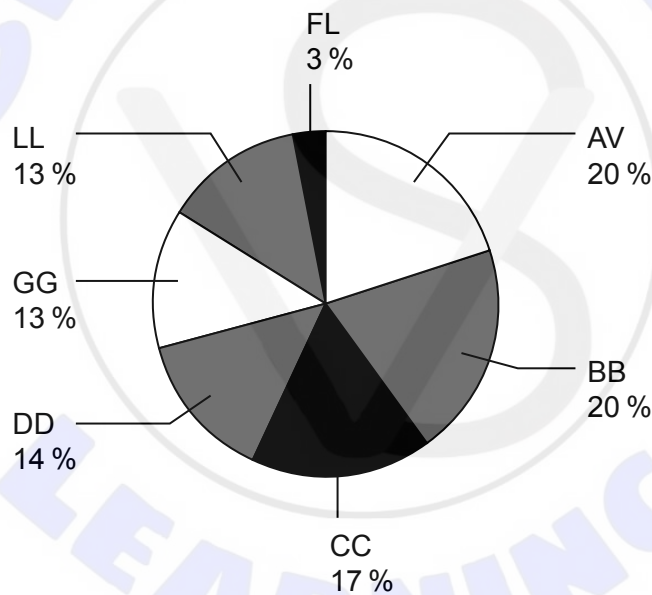
Acquisitions and mergers are increasing in the airline industry. *FL* has proposed to *AV* a joint venture. *AV*'s shareholders are unsure about the deal. *AV*'s chief executive officer (CEO) has written a report on both airline companies. Selected financial information from this report is shown in **Table 5**.

Table 5: Selected financial information from the CEO's report (all figures in %)

	AV		FL		Industry average	
	2022	2023	2022	2023	2022	2023
Increase in aircraft repair costs	7	9	0.5	0.5	3	4
Profit margin	-1	-2	0.5	1	0.2	1.5
Gearing ratio	1.6	1.5	16	18	6	5

Figure 1 shows the market share for airlines operating in South America.

Figure 1: Market share for airlines operating in South America



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5. Airport Services (AS)

Airport Services (AS) is a supplier of baggage handling and general security services to six small local airports across Europe.

AS's 400 employees are given extensive training, including a three-week induction training programme.

(a) Describe **one** feature of induction training. [2]

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Many of AS's longest-serving employees left during the COVID-19 pandemic. The employees moved into other jobs and have not returned to AS. New employees had to undergo training, and Brian Garbett, the chief executive officer (CEO), feels that they do not show the level of commitment to the role compared to previous employees.

Since 2021, there has been increasing tension between managers and employees at AS.

Between February and March 2024, Brian decided to carry out an employee survey. Only 35% of employees responded. He wonders whether he should offer performance-related pay (PRP) to improve relations between managers and employees.

A summary of the key findings from the employee survey is shown in **Table 6**.

Table 6: Findings from the employee survey for AS

Employee opinions about:	Happy	Acceptable	Unhappy
Hours of work	15%	70%	15%
Salary	5%	20%	75%
Support from management	5%	15%	80%
Do managers listen?	7%	14%	79%
Do you feel valued?	4%	9%	87%

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(Question 5 continued)

(b) Comment on the employee survey carried out by Brian.

[2]

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(c) With reference to expectancy theory **and Table 6**, explain **one** reason why Brian should be concerned by the results of the employee survey.

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After the survey was completed, Brian noticed that manager–employee relations worsened.

An employee representative approached Brian and demanded a 15% increase in pay. The employee representative highlighted that the employees' living standards had fallen over the last two years. Brian was worried by the pay increase demanded and was hoping to agree a 6% increase, plus an extra 2% for overtime work. He informed the representative of his proposed percentage.

The employees are unhappy with a 6% pay increase and have threatened industrial action, including work-to-rule and strikes. This industrial action would target the upcoming summer holiday period at airports that AS serves.

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(Question 5 continued)

(d) Explain **two** disadvantages for AS of its employees implementing a work-to-rule. [4]

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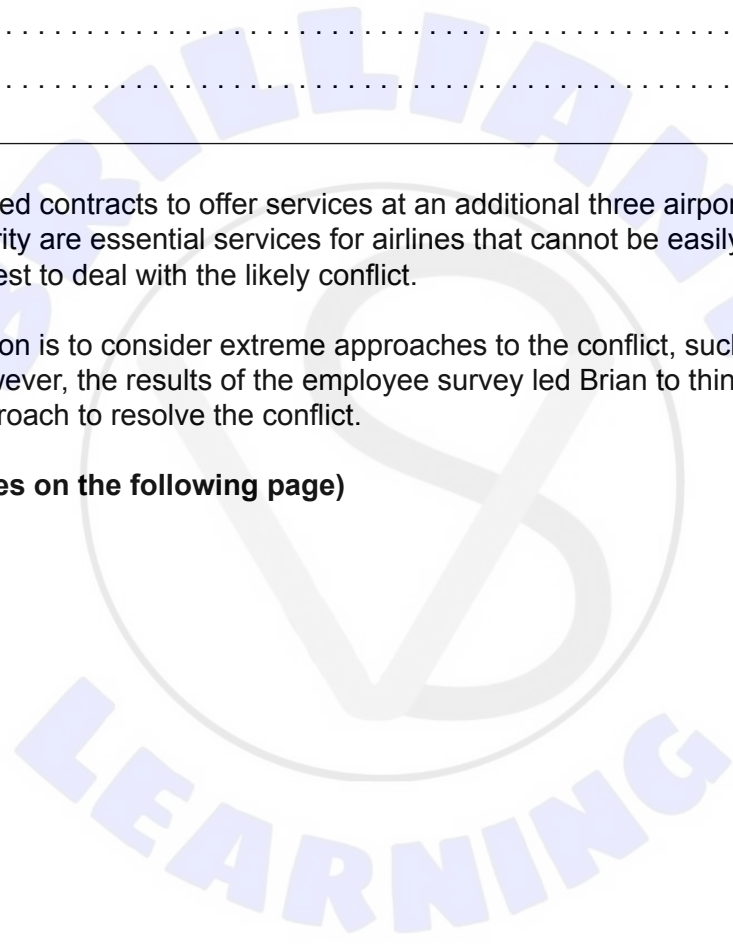
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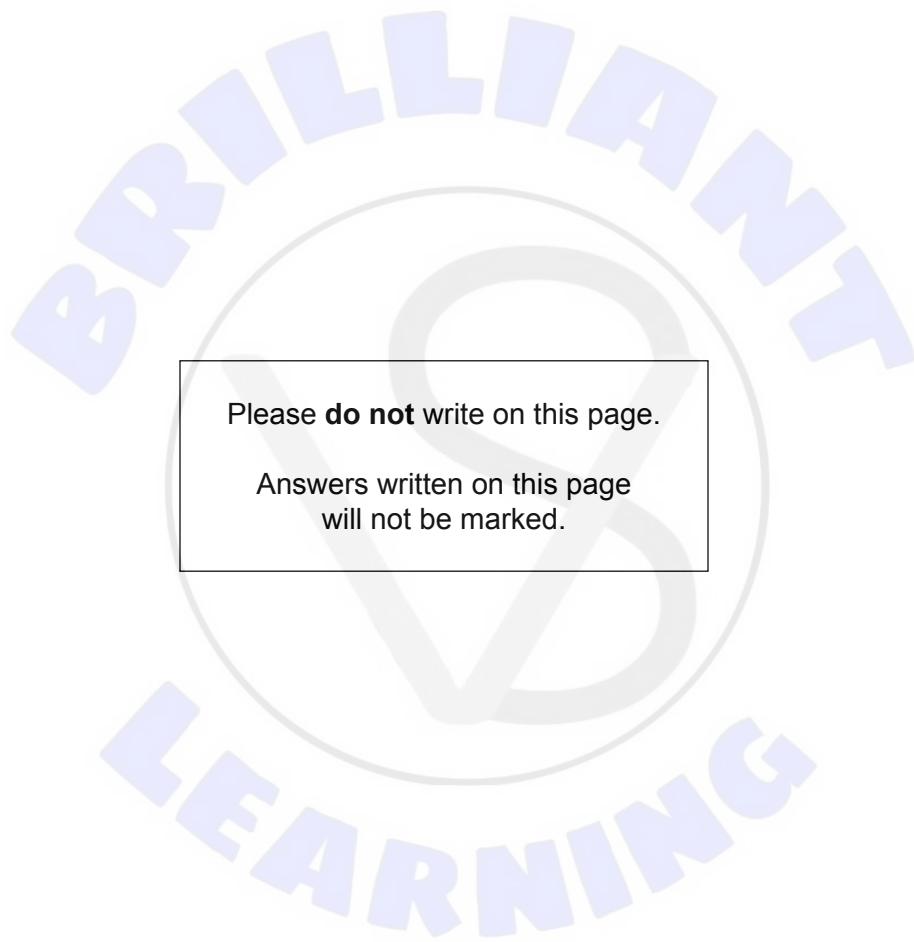
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AS recently accepted contracts to offer services at an additional three airports. Baggage handling and security are essential services for airlines that cannot be easily replaced. Brian is unsure of how best to deal with the likely conflict.

Brian's initial reaction is to consider extreme approaches to the conflict, such as threats of redundancies. However, the results of the employee survey led Brian to think he needed to use a different approach to resolve the conflict.

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