Business management
Higher level
Paper 2

Friday 9 November 2023 (morning)

1 hour 45 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 three questions.
- Section B: answer one question.
- A calculator is required for this examination paper.
- The maximum mark for this examination paper is **[50 marks]**.

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Section A

Answer **three** question from this section.

1. Roscas

Roscas produces and sells sugar donuts. Monthly fixed costs are $15 000, monthly sales revenue is $70 000, and total variable costs per month are $25 000. To increase its productivity rate, *Roscas* wants to buy a new high-efficiency machine that produces chocolate-filled donuts. The finance manager has forecasted the following information.

Table 1: Forecasted information for the production of chocolate-filled donuts

Price per unit	$5
Variable costs per unit	$2
Sales revenue per month	$100 000
Fixed costs per month	$1000

Table 2: Forecasted cash flow for the new machine

Year	Net cash flows ($000s)
0	–2000
1	600
2	650
3	670
4	700
5	710

(a) Define the term *productivity rate*. [2]

(b) Using the information provided above and in **Table 1**, calculate:

(i) the total contribution per month for the production of 20 000 chocolate-filled donuts (*show all your working*); [2]

(ii) the monthly profit if *Roscas* sells sugar donuts **and** chocolate-filled donuts (*show all your working*). [2]

(c) Using the information provided above and in **Table 2**, calculate:

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

(ii) the average rate of return (ARR) for the new machine (*show all your working*). [2]

2. Les Légumes Contentes (LLC)

Les Légumes Contentes (*LLC*) is a cooperative of farmers that sells organic produce. *LLC*'s starting capital is $5000. It needs a bank loan to buy refrigerators for its store. The bank has requested a cash-flow forecast. The forecasted figures are shown in **Table 3**.

Table 3: Forecasted figures for *LLC* for the first four months of operations, beginning 1 January

Average price per kg of produce	$4
Forecasted sales for January	3000 kg
Forecasted sales from February onwards	4000 kg
Cash sales	50 % of each month's sales, from customers paying at the cooperative store
Credit sales	50 % of each month's sales, sold to supermarkets and payable one month later
Rent	$4500 per month
Labour costs	$2500 per month
Cost of goods sold	40 % of sales revenue per month
Overhead costs	$1100 per month, paid in cash

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

(b) Using **Table 3** and the information provided above, prepare a monthly cash-flow forecast for *LLC* for the first four months of operations. [6]

(c) Calculate *LLC*'s forecasted net profit at the end of April (*show all your working*). [2]

3. **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]

Section B

4. Bandit & Max

Bandit & Max (*BM*) is a partnership between Dr. Jones and Dr. Morris that produces specialist food for dogs with health problems. *BM*'s unique selling point/proposition (USP) is food for dogs with diabetes and digestive or kidney problems. *BM*'s mission statement is, "To help strengthen the bond between people and their dogs."

BM uses a cost-plus (mark-up) pricing strategy; however, the costs of raw materials are rising. *BM* has an excellent brand image and sells its products only through veterinarians and large pet shops that provide advice to customers. Veterinarians recommend *BM*'s dog food because of its high quality and nutritional value. However, potential customers in some areas lack access to *BM*'s food. *BM*'s sales are not growing.

Dr. Morris wants to diversify into specialist cat food, as more people are buying or adopting cats. *BM* has experience in developing new products. In the past, *BM* outsourced its research and development. Now, Dr. Morris wants *BM* to build its own research facilities, but building costs are high. *BM*'s warehouse will need refurbishing to stock more food. *BM* could become a private limited company to raise the necessary finance.

Dr. Jones disagrees. He believes *BM* should not diversify. *BM*'s current distribution costs are high. He has suggested introducing a new distribution channel for the dog food that includes a large supermarket chain, a wholesaler, and many small pet shops.

(a) Describe **one** feature of a mission statement. [2]

(b) Explain **two** advantages of *BM*'s unique selling point/proposition (USP). [4]

(c) Explain **one** advantage **and one** disadvantage for *BM* of using a cost-plus (mark-up) pricing strategy. [4]

(d) Discuss whether *BM* should diversify into specialist cat food **or** introduce a new distribution channel for dog food. [10]

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 at FR may damage motivation amongst head office staff. [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: