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# Business management

## Higher level

### Paper 2

Friday 29 April 2022 (morning)

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

## Section A

Answer **one** 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]

**Turn over**

## Section B

Answer **two** questions from this section.

### 3. Carol's Designs (CD)

Carol Rodríguez is passionate about design. She runs *Carol's Designs (CD)* with two assistants, making and selling party dresses directly to consumers through her website. Customers provide their style preferences and measurements. Then, Carol emails a computer-designed drawing for the customer's approval. *CD* uses job/customized production.

An emerging talent in dress design, Carol decided to use e-commerce because she could not afford the fixed costs of an expensive physical location and traditional promotional techniques. Through her website, she promotes and sells her designs to a large audience and collects valuable information and opinions from her customers. The business-to-consumer (B2C) approach, essential for her business growth, requires regular website updates.

E-commerce sales have steadily increased worldwide, and Carol's dress orders have increased too. However, *CD* regularly misses delivery deadlines and is often short of cash. Carol's bank suggested that she find a partner. She approached Juan Pérez, an engineer and business angel, about becoming a 50% partner in *CD*. Juan thinks Carol needs to delegate design and focus on the operation of the business.

*CD* uses social media marketing. Alexia Bros, a famous actress, ordered a dress for this season's cinema festival, and Carol uploaded pictures of Alexia wearing her newly designed dress. Recently, however, some negative comments, including customer complaints about delays in delivery times, have appeared on social media. Carol did not have time to reply to these complaints. She is planning to hire a social media marketing manager.

- (a) Define the term *fixed cost*. [2]
- (b) Explain **one** advantage **and one** disadvantage for *CD* of using a job/customized production method. [4]
- (c) Explain **one** advantage **and one** disadvantage for *CD* of forming a partnership. [4]
- (d) Discuss Carol's decision to use e-commerce. [10]

#### 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]

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 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]

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### References:

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