



**BUSINESS AND MANAGEMENT
STANDARD LEVEL
PAPER 2**

Tuesday 6 May 2008 (morning)

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Do not open this examination paper until instructed to do so.
- Answer three questions.

1. Cochabamba Academy

Silvia and Daniel are planning to open a school in Bolivia called the *Cochabamba Academy*. They are currently analysing the figures to consider whether, with their initial capital investment of \$63 000, the Academy will be profitable. They are worried about potential cash flow problems that the school might face and have collected the following financial information:

Planned Inflows

- a monthly school fee paid from February until November of \$200 per student
- an annual registration fee of \$300 in October

Planned Outflows

- a total of 11 teachers will be employed at \$500 per month, per teacher
- Silvia and Daniel will manage the school and pay themselves salaries of \$2000 each per month
- the average monthly expenses are \$20 000

They plan to open 8 classes. Each class will have an average of 20 children. Below is an excerpt from a cash flow forecast that they have prepared:

	September	October	November	December
Inflows				
Fees	32 000	32 000	32 000	0
Registration fee		48 000		
Total Inflows	32 000	80 000	32 000	0
Outflows				
Salaries	9 500	9 500	9 500	9 500
Expenses	20 000	20 000	20 000	20 000
Total Outflows	29 500	29 500	29 500	29 500
Net cash flow	2 500			
Opening balance	15 000			
Closing balance	17 500			

(This question continues on the following page)

(Question 1 continued)

- (a) (i) State on the lined paper provided for your answers the values for:
- net cash flow in October
 - closing balance in October
 - closing balance in November
 - net cash flow in December. *[4 marks]*
- (ii) Comment on the cash flow position of the *Cochabamba Academy*. *[4 marks]*
- (b) (i) Given the information opposite, calculate the annual profit or loss of the *Cochabamba Academy*. *(Show all your working)* *[4 marks]*
- (ii) Calculate the payback period on the initial investment of \$63 000. *(Show all your working)* *[2 marks]*
- (c) Based on financial **and** non-financial factors, evaluate whether Silvia and Daniel should open the *Cochabamba Academy*. *[6 marks]*

2. The Biodegradable Bottle

It is the bottle that could launch a revolution. The first biodegradable bottle has been developed, raising hopes that we may one day stop adding to the mountain of plastic packaging accumulating in landfill sites. People in Britain throw away the equivalent of their body weight in rubbish every seven weeks. A growing consumer backlash against the growth in packaging has prompted businesses to explore “greener” alternatives.

The biodegradable water bottle has been developed by a new company, *Belu* who are committed to environmental protection. The bottle is made of corn and decomposes in home compost in months. However the unit cost of the bottles is considerably higher than for conventional plastic bottles.

A famous French water bottling firm is considering using the new biodegradable bottle. Their market research has shown that their customers consider themselves environmentally friendly and respond favourably to the idea of the new biodegradable bottle. However, test marketing has shown that this environmental aspect has little influence at the point of sale, where price remains the most important factor in their purchasing decision.

[Source: adapted from *The Independent*, 29 May 2006]

- (a) Identify **two** stakeholders of *Belu*. [2 marks]

- (b) Explain how the French water bottling firm might be able to identify the target market for water sold in biodegradable bottles. [4 marks]

- (c) Explain how the higher unit cost might affect the price and promotion elements of the marketing mix for water sold in biodegradable bottles. [6 marks]

- (d) Evaluate whether the French water bottling firm should use the biodegradable bottle. [8 marks]

3. Fish Packaging in Reykjavik

The firm *Fish Packaging Ltd* owns a fish packaging plant in Reykjavik, Iceland, and sells frozen fish to the domestic market. Workers in the plant are paid \$10 per hour to pack fish into boxes. They are expected to pack approximately 13kg per hour. When local fishing boats do not go out fishing, there is nothing to pack. When this happens the workers stay at home and are still paid \$4 per hour.

The workers are concerned about a number of issues including:

- poor weather has led to local fishing boats fishing less, so workers are staying home more often
- an autocratic leadership style
- a lack of involvement in day-to-day decision making
- a shortage of protective clothing
- insufficient rest breaks during the working day.

Management complains that workers seldom exceed the target of 13kg per hour and are also concerned about the possible imposition of fishing quotas by governments. Furthermore, the fish packaging industry has been badly hit by the competition of Russian factory ships. Management feels it has to make some changes and is considering the introduction of a piece rate payment system.

- (a) (i) Describe the difference between time rate and piece rate payment systems. [2 marks]
- (ii) Explain **two** disadvantages and **one** advantage of introducing a piece rate payment system at *Fish Packaging Ltd*. [6 marks]
- (b) Explain **two** external factors that could influence *Fish Packaging Ltd*. [4 marks]
- (c) Using appropriate motivation theory, evaluate possible changes the management of *Fish Packaging Ltd* could introduce to improve the motivation of the work force. [8 marks]

4. Chilean Wine

The winery *Vino Tinto plc*, a Chilean firm established in 1920, has grown to become the largest and most successful winery in its country. They have a very high market share in Chile and are considering international expansion. To finance this international expansion *Vino Tinto plc* needs an investment of \$500 000 to build further production facilities. They could borrow from a large commercial bank but the owners are concerned about the current gearing ratio of the firm.

The owners are considering one of two possible options. The first option is to grow by exporting the additional production to other countries in Latin America. This would enable them to benefit from Chile's associate membership of the regional economic bloc Mercosur. The second option is to enter the Chinese market, with its enormous growth potential. The local board of commerce has advised them that they must form a joint venture if they want to pursue the idea of exporting to China.

- (a) (i) Define the term *gearing ratio*. [2 marks]
- (ii) Describe **two** finance options that *Vino Tinto plc* can use to finance the investment other than a bank loan. [4 marks]
- (b) Explain **three** possible difficulties of international marketing for *Vino Tinto plc*. [6 marks]
- (c) Evaluate the **two** options being considered by *Vino Tinto plc*. [8 marks]

5. Tommy the Baker

Tommy the Baker has developed a range of specialty breads. His turnover is growing fast and customers are coming from further away to purchase his products. In order to sustain long-term growth Tommy wants to expand the business by franchising. He has already received enquiries from a number of potential franchisees and needs to show them clear financial figures.

The bakery makes and sells 400kg of bread per day. The raw materials for the bread are flour, yeast and spices. The bakery works every day of the month (assume 30 days) and employs 4 workers who earn an average of \$1000 each. Tommy does not pay himself a salary. Each kg of bread sells for \$3. His initial investment to buy the three machines he uses, the oven and the counters and other fittings was \$80 000.

Fixed costs per month:

Rent, gas bill, electricity, cleaning and maintenance of machines and shop: \$8000
Salaries: \$4000

Variable costs per kg of bread:

Flour/kg = \$0.50
Yeast/kg = \$0.20
Spices/kg = \$0.25

- (a) Describe **one** advantage and **one** disadvantage of growth by franchise to *Tommy the Baker*. [4 marks]

 - (b) Assuming that the bakery is currently producing 12 000 kg of bread per month:
 - (i) calculate the monthly break-even level of output, the level of profit and the margin of safety. (*Show all your working*) [4 marks]

 - (ii) prepare a break-even chart showing clearly the monthly break-even level of output, the level of profit and the margin of safety calculated in (b)(i). [4 marks]

 - (c) Discuss the limitations of a potential franchisee using break-even analysis as the only source of information when considering whether to adopt a *Tommy the Baker* franchise. [8 marks]
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