



MARKSCHEME

May 2008

BUSINESS AND MANAGEMENT

Standard Level

Paper 2

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1. (a) (i) State in your answer booklet the values for:
- net cash flow in October
 - closing balance in October
 - closing balance in November
 - net cash flow in December.

[4 marks]

	September	October	November	December
Inflows				
Fees	32 000	32 000	32 000	0
Registration		48 000		
Total A	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 B	29 500	29 500	29 500	29 500
A-B	2 500	50 500	2 500	(29 500)
Opening bank balance	15 000	17 500	68 000	70 500
Closing bank balance	17 500	68 000	70 500	41 000

[4 marks]

The answers are completely accurately. No mistakes are made.

[2 to 3 marks]

The answers are essentially accurate but one mistake is made for *[3 marks]*.

[1 mark]

The answers are inaccurate, showing only a basic knowledge of cash flow. There are two or more mistakes.

- (ii) **Comment on the cash flow position of the Cochabamba Academy.** **[4 marks]**

Essentially the cash flow situation is positive, since there are no months in which the school has to use the overdraft facility of the bank. It does not need to borrow. It seems that expenses are rather high for the two months when there are no students. If they could keep expenses down during those months, cash flow could improve. The registration fees are necessary to provide the buffer to face the difficulty of the months with no inflows.

[3 to 4 marks]

The cash flow situation is clearly commented on. Attention is paid to the months without inflow, and to the buffer effect of registration fees.

[1 to 2 marks]

The cash flow situation is described as positive with little or no detail given.

N.B. Please note own figure rule applies if candidate's answer in 1(a)(i) is different to those in the table.

- (b) (i) **Given the information opposite, calculate the annual profit or loss of the Cochabamba Academy. (Show all your working)** **[4 marks]**

Total revenue – Total costs = Total profits/losses

Total revenue = \$368 000

(\$32 000 fees × 10 months + \$48 000 registration fee)

Total costs = \$354 000 (\$9500 salaries × 12 + \$20 000 expenses × 12)

Total profits = \$14 000

[4 marks]

The calculation is correct. Working is shown.

[2 to 3 marks]

The calculation is correct but working is not shown/or working is shown, and is essentially correct, but up to two mistakes are made.

[1 mark]

The calculation is incorrect, working is wrong or incomplete, but there is a basic knowledge of profit concept.

- (ii) Calculate the payback period on the initial investment of \$63 000. *[2 marks]*
(Show all your working)

At \$14 000 per year, the investment is recovered in 4 years 6 months.
Cost of project/annual profits = payback period
 $\$63\,000/\$14\,000 = 4 \text{ years } 6 \text{ months}$

[2 marks]

The calculation is correct. Working is shown.

[1 mark]

Either calculation is incorrect, but working is accurate, or calculation is correct but working is not shown.

- (c) **Based on financial *and* non-financial factors, evaluate whether Silvia and Daniel should open the *Cochabamba Academy*.** **[6 marks]**

The forecasted financial figures given are:

Payback: 4.5 years

Return on capital invested: 22.2 %

No variable costs.

The initial forecasts seem promising (as long as we can compare them with other firms) and with no variable costs projected, any increase in student numbers beyond those already estimated would translate into further profits.

However, a number of issues remain. Additional market research will be needed. Primary, in order to gauge word of mouth recommendations from stakeholders and secondary to see if *Cochabamba Academy's* pricing is realistic compared to other local schools. There may also be the need to find out how the school can differentiate itself in the community if projected student numbers fail to live up to expectations. We need to remember that these are forecasted figures only.

Other non-financial information could include a review of the state of the local economy surrounding *Cochabamba Academy* although some parents may be price inelastic in demand if they place a high value on education. As the school grows, staff responsibilities may increase and this may affect salary costs.

[5 to 6 marks]

Both financial **and** non-financial factors are discussed using information from the case study. A judgment is presented and is consistent with the analysis.

[3 to 4 marks]

The answer is unbalanced with either financial **or** non-financial factors being considered. A judgment may be present but is not consistent with the analysis. If no judgment is given award only **[3 marks]**.

[1 to 2 marks]

A simplistic and general response, which does not include a recommendation or does not use the available information.

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

Any two from:

- consumers
- workers
- management
- competitors
- government
- pressure groups
- *any other suitable interested party.*

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

A French water bottling firm could undertake both primary and secondary research. Primary could include focus groups, a quota sample of individuals who are willing to pay a premium for bottled water sold in a biodegradable bottle.

Secondary could look at economic and social trends available from *Census* documents or other government publications about attitudes to the environment, landfill and recycling.

[3 to 4 marks]

Up to two methods of market research are given with direct reference to the French water bottling firm to help identify the target market. Both primary and secondary sources need to be present for **[4 marks]**. Candidate must give two distinctly different types of market research *e.g.* one example of primary and one example of secondary research. If the candidate gives two examples which are similar, such as questionnaires and interviews, only **[3 marks]** may be awarded.

[1 to 2 marks]

Up to two methods of market research are given but they are generalized and not appropriate to the needs of the French water bottling firm. Award **[1 mark]** if a candidate simply lists or identifies two or more sources.

- (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]**

It is stated in the case that the new bottle's unit cost is considerably higher than that for conventional bottles. This will attract a price premium and may initially lead the firm to consider a price skimming strategy in the mix. However, the point of sale findings may limit the extent to which firms can exploit this differential unless the perceived added value of the biodegradable bottle is considerable. This may be tricky for a new product in the short run.

For promotion, the bottle provides for a significant point of difference from the existing competition, which could be highlighted at product launches and other forms of above-the-line promotion. A joint venture with an environmental pressure group or stakeholder could be mutually beneficial, enhance "green" credibility, and attract free publicity.

However, it would be foolish to ignore the test marketing findings. Promotional strategies will need to be carefully considered otherwise precious funds could be wasted.

[5 to 6 marks]

Both price and promotion elements of the marketing mix are considered and explained in detail. There is a balanced explanation of the strengths and weaknesses.

[3 to 4 marks]

There is an explanation of both the price and promotion elements but it lacks detail at the lower end of the band. Either price or promotion is considered but not both. There is some relevance to the issues in the case. For **[4 marks]**, the candidate must mention both price and promotion.

[1 to 2 marks]

The answer is generalized and descriptive and is little more than a list of points. There is a lack of marketing terminology used and relevance to the case.

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

[8 marks]

The French firm will be able to use the biodegradable bottle to differentiate it as a responsible firm that cares about the environment. This will increase its sales, and therefore profits. Workers may like to be part of environmentally friendly firms. They feel proud to work in a firm that prioritized the long term, and this acts as a motivating factor for them. Shareholders like to be owners of environmentally friendly firms. More ethical sources of finance might become available. External stakeholders such as *Friends of the Earth* can be allies to the firm and give positive publicity to the product, benefiting the firm.

There is a certain risk in trying to sell water in the new biodegradable bottles. The public might not be yet ready to pay a premium price for a bottle that will have beneficial long-term benefits for the planet, but not short-term benefits for them. Further investigation will need to be undertaken to evaluate this point of sale influence.

The investment required for the product launch and to fund the market research might be too high for the firm. High-income people might prefer the old-fashioned glass water, which can be easily recycled. More research into consumer buying habits will be needed. There may not be enough secondary data available.

A first-mover advantage will only be obtained if the promotion and positioning of the new drink is successful. The French were the ones who created the bottled water market so it is very possible that being pioneers again in the packaging of this water will be a positive decision.

[7 to 8 marks]

There is a balanced and detailed evaluation of the arguments for and against whether the French firm should use the new bottle. There is a clear judgment, which is fully substantiated by the analysis, which contains appropriate terminology.

[5 to 6 marks]

There is an analysis of the arguments for and against using the biodegradable bottle. For **[5 marks]** a judgment is made but only on consideration of one side of the argument. There is some appropriate marketing terminology used.

[3 to 4 marks]

A number of points are raised. There is some relevance to the French firm but the analysis is superficial. No judgment is made.

[1 to 2 marks]

A generalized and weak response which is descriptive or in the form of a list.

3. (a) (i) **Describe the difference between time rate and piece rate payment systems.** [2 marks]

Time rate is a method of paying wages based on the hours the workers spend performing a specific task. Piece rate is a method of paying wages based on the amount of items produced, in this case, the kg of fish packed.

Award [2 marks] for an answer that clearly differentiates between the two terms, and [1 mark] if the answer lacks clarity and/or understanding.

- (ii) **Explain two disadvantages and one advantage of introducing a piece rate payment system at *Fish Packaging Ltd*.** [6 marks]

Disadvantages could be:

Quality control concerns as workers speed up the packaging process as they are now paid on a per-box-packed basis (further health and safety concerns as the production process is now more competitive and employees “cut corners” to increase their salary).

The piece rate scheme may make it harder for *Fish Packaging Ltd* to monitor and control costs especially variable wages.

The change to the new payment system may take time to “bed in”. There may be some initial worker reluctance and a decline in motivation.

Advantages could include:

Increased productivity and a reduction in short-run unit costs.

The change could provide an opportunity to discuss or consult about bringing in the changes. This could tackle the “them and us” attitude, which seems to pervade at *Fish Packaging Ltd* and lead to an improvement in the working environment.

[5 to 6 marks]

Two disadvantages and one advantage are clearly explained with direct relevance to *Fish Packaging Ltd*.

[3 to 4 marks]

A candidate clearly explains only one disadvantage and one advantage. If one advantage is clearly explained and two disadvantages stated, award [4 marks].

The answer is briefly explained for [3 marks]. There is some relevance to *Fish Packaging Ltd*.

[1 to 2 marks]

A brief descriptive answer. If only one point is made then award [2 marks] only if it is applied to *Fish Packaging Ltd*.

(b) Explain two external factors that could influence *Fish Packaging Ltd.* [4 marks]

External factors could include:

- poor weather conditions affecting the ability of the boats to catch fish
- imposition of fishing quotas by the Government
- increasing threat of competition of Russian fishing boats
- threat of increased Health and Safety guidelines at a time when there is a shortage of protective clothing.

[3 to 4 marks]

Two relevant factors are clearly explained and are applicable to *Fish Packaging Ltd.*

[1 to 2 marks]

Only one factor is explained. Award a maximum of [2 marks] if external factors are identified but poorly applied to the case or simply listed.

(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]

(The case study implies Herzberg’s two-factor theory of motivation is the most applicable theory. However, credit must be given if alternative theories as McGregor’s X and Y management study or Maslow’s Hierarchy of Needs is applied in context.)

Herzberg introduces the concept of hygiene factors as those that do not motivate workers when they are offered, or are present in the work place, but they cause dissatisfaction when they are absent. The motivating factors have to do with the job itself and the possibility for growth and advancement that each worker will find in the place of work.

Hygiene factors	Motivating factors
Work conditions	Achievement
Salary	Recognition
Relationship with supervisor	Responsibility
Relationship with peers	Advancement
Company policy	Personal growth

The firm does not provide its workers with reasonable working conditions. It is too cold and generally unhealthy. Moreover, the autocratic leadership style (McGregor Theory X) and a lack of involvement in the day-to-day decision making is clearly making things difficult especially if the management are seeking to introduce changes.

As survival of the firm depends on the efforts of all employees and taking notice of the external factors beyond the firm's control, clear goals and objectives will need to be set. This will not be easy but the introduction of worker recognition, responsibility and personal growth may encourage some of the workers to accept the changes and bring the management and workers closer together to improve the current working environment. Motivation will also depend on satisfying some of the safety and security needs before negotiations can take place. This may prove expensive. There are no simple solutions to the problems of *Fish Packaging Ltd* and the analysis should try to reflect this.

[7 to 8 marks]

There is a balanced and detailed evaluation of possible changes management could make to improve motivation. There is accurate and effective application of at least two motivational theories. There is some recognition that there might be difficulties in introducing change.

[5 to 6 marks]

The analysis is relevant but not detailed. There is application of at least one motivational theory but for ***[5 marks]*** there is no evaluation. For ***[6 marks]***, the candidate may recognise that change will be difficult to achieve.

[3 to 4 marks]

The analysis is generalized and unbalanced. For ***[3 marks]*** some motivational theory is present but poorly applied to *Fish Packaging Ltd*.

[1 to 2 marks]

Answers are brief and descriptive. There is no supporting theory and little or no relevance to *Fish Packaging Ltd*.

4. (a) (i) **Define the term *gearing ratio*.** ***[2 marks]***

The term gearing ratio expresses the ratio between borrowed capital and total capital employed. It is a measure of efficiency to help interpret the degree to which the activities of the firm are too tied up in loans that have to be financed and returned.

Award ***[2 marks]*** for a full definition.

Award ***[1 mark]*** for the gearing ratio formula alone or an incomplete definition.

- (ii) Describe *two* finance options that *Vino Tinto plc* can use to finance the investment other than a bank loan.

[4 marks]

If the winery does not want to borrow from a bank it has other options. Some of the options are:

- Issuing more shares. The owners of the winery might be able to invite more shareholders to their already successful business venture. This method entails approaching individuals or institutional investors with capital and convincing them that the growth project they have is viable and profitable. Shares allow shareholders to vote at the AGM, so their capacity to influence on the firm will depend on the percentage of shares they hold.
- Selling assets, if there were any assets that are being underutilized. If there are these assets, it is an easy, cheap and efficient way to raise capital. It is not very feasible for firms which are efficient to have available assets that they can sell, or sell and lease back but it might be possible and could be considered as an option.
- Mortgage, this is borrowing from a financial institution against the ownership of a real estate asset. It is securing a loan against real estate. The firm is definitely the owner of fertile land where grape vines grow. These fields can be mortgaged and the money raised used to purchase more land for the new venture. The loan is long term, as long as 30 years, and the creditor does not become an owner, therefore has no voting rights. If the loan is not paid back the secured asset is taken by the creditor.

Also credit candidates who make references to other sources of finance such as venture capital, retained profit.

[4 marks]

Candidates describe two relevant methods of financing and are applied to *Vino Tinto plc*.

[3 marks]

The candidate describes one relevant method of finance with appropriate description and application and provides another solution to *Vino Tinto*'s problem related to expansion, such as a joint venture.

[1 to 2 marks]

Two relevant methods are described, but there is no relevance to *Vino Tinto plc*. Award only [1 mark] if two methods are identified but no description is provided.

(b) Explain *three* possible difficulties of international marketing for *Vino Tinto plc*.

[6 marks]

International marketing has additional difficulties to domestic marketing:

- it is a lot more time consuming. New contacts have to be established, there are distances to cover and time gaps to fill
- it is more expensive in terms of investments that have to be made ahead of time, to be successful. An example is the joint venture suggestion, which needs a capital investment in order to get registration in China
- there might be language differences: all the specifications have to be translated, in this case the labels have to be changed
- there might be cultural differences that have to be looked into, so that the marketing of the product is properly directed to the target market
- transport options have to be investigated in order to consider the most suitable and efficient one. This adds to the costs of production
- higher financial risk since time gaps increase between production and payment of exports. The working capital needed is much higher, and cash flow problems can arise
- changes in political climate of the country to which the product is exported can affect sales. Unexpected changes in the law could, for example, affect the currency exchange rate
- there may be different “rules” that have to be learned and respected in order to be allowed to trade in some countries.

[5 to 6 marks]

Three possible difficulties of international marketing for *Vino Tinto plc* are explained.

[3 to 4 marks]

Less than three difficulties are explained, or three are explained but not all are relevant to *Vino Tinto plc* or to international marketing.

[1 to 2 marks]

The difficulties are listed or generalized. There is no relevance to international marketing or *Vino Tinto plc*.

(c) Evaluate the *two* options being considered by *Vino Tinto plc*.

[8 marks]

Exporting to Latin America:

Advantages: the Latin American market is well known to the Chilean firm. Countries share the culture and the language, with the exception of Brazil, which speaks Portuguese. Generally in the Latin American countries wine is a very common drink and Chilean wine is already positioned as a premium product. Regional economic blocs in the region have the advantage of creating conditions within the bloc that promote trade, through lower tariffs or by removing them altogether.

Distances in Latin America are big, but manageable. Some countries can be reached by boat and those that can't can be reached by train or road. Some are less accessible (Bolivia and Paraguay) due to a poor infrastructure. The population of all of Latin American countries is 350 million, compared to China which is 1300 million.

Disadvantages: most of Latin America is relatively poor, and the market that can buy quality Chilean wines, is relatively small. The growth potential of Latin America is much smaller than that of China so the future development in this region is limited.

Exporting to China:

Advantages: the potential of the Chinese market is huge. The economy is growing at a very fast pace, much more than Latin America. With a population of 1300 million and still few people drinking wine, to enter the market at an early stage may allow huge growth capacity. Chile has a long coastline on the Pacific Ocean as does China and boat transport is an efficient form of transport for wine, which does not “go bad” with time or need any special refrigerated conditions, so transport to the market is relatively straightforward.

Disadvantages: distance could increase the costs of wines to such an extent that it will make the wine less competitive. The differences in cultures and language are important. People in China do not drink a lot of wine (0.36 litres per year per capita). The market has still to be developed. It is necessary to form a joint venture if going into China, which is costly and can bring about problems if the Chinese firm is not trustworthy.

Since the growth capacity of the Chilean firm is limited to the growth of the available farm land it seems that the advantages of exporting to Latin America, outweigh the disadvantages. The firm is not going to grow so much that it will saturate the Latin American market, so the advice may be to first satisfy the closer market and then consider further growth and entry into China.

[7 to 8 marks]

The two options being considered are critically analysed. A judgment as to which course of action should be taken is clearly stated. Either option could be accepted as long as the judgment is substantiated.

[5 to 6 marks]

Both options are considered but the evaluation as to which option is selected is unbalanced and lacking in detail. There is a judgment but it may not be fully substantiated by the analysis.

[3 to 4 marks]

The analysis is predominantly descriptive. Both options are considered for ***[4 marks]*** but the analysis may not make any reference to *Vino Tinto plc*. If only one option is considered, award a maximum of ***[3 marks]***.

[1 to 2 marks]

The answer is very generalized and may contain just a list of points.

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

Advantages may include: franchisor does not have to invest capital, therefore risk is lower. It receives a franchise fee and royalties and can demand franchisor to buy its products. Has a greater capacity for growth this way, and can reach more areas (since bread is a convenience good).

Disadvantages may include: could earn more if growth was internal, and Tommy opened the shop branches himself. He would earn the profits that otherwise the franchisor will earn. He must supervise the franchises to guarantee that the bread is of the same quality as the one he makes.

[3 to 4 marks]

One advantage and one disadvantage is described in detail and relevant to *Tommy the Baker*.

[1 to 2 marks]

One advantage and one disadvantage are described but are not relevant to *Tommy the Baker*. If only two advantages or two disadvantages are given award a maximum of *[2 marks]* even if they are described in detail. If a candidate describes only one advantage or one disadvantage and describes it fully, award *[2 marks]*, as long as it is relevant to *Tommy the Baker*. For *[1 mark]* one advantage and one disadvantage are identified but not described.

(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]

Calculations

$$\text{Fixed costs} = \$8000 + \$4000 = \$12\,000$$

$$\text{Variable costs} = (\$0.5 + \$0.25 + \$0.2) = \$0.95$$

$$\begin{aligned} \text{Selling price} - \text{Variable cost per unit} &= \text{Contribution} = (\$3 - \$0.95) \\ &= \$2.05 \end{aligned}$$

Formula

$$\text{Fixed costs/Selling price/kg} - \text{Variable costs/kg}$$

Break-even point

$$\$12\,000/(\$3 - \$0.95) = 5853 \text{ kilograms of bread per month [2 marks].}$$

Award **[1 mark]** if basic understanding of break-even is shown but the workings are incorrect or difficult to follow.

$$\text{Margin of safety} = \text{Current output} - \text{Break-even point}$$

$$12\,000 \text{ kg} - 5853 \text{ kg}$$

$$\text{Margin of safety} = 6147 \text{ kg/month [1 mark].}$$

$$\text{Total profit} = \text{Margin of safety} \times \text{Contribution}$$

$$\text{Contribution} \times \text{Margin of safety} = \$2.05 \times 6147 \text{ kg}$$

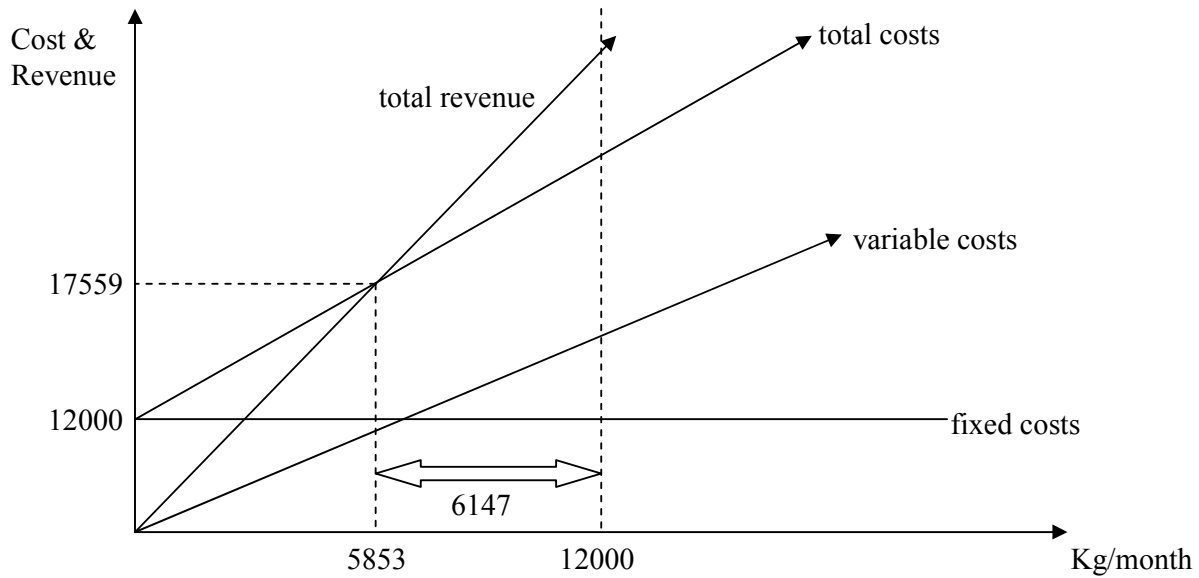
$$\text{Profits per month} = \$12\,601.35 \text{ [1 mark].}$$

Own figure rule applies in later calculations.

If no workings are shown and the answer is correct, award the marks as appropriate. We will assume that the answer has been calculated but the workings have been omitted.

All answers within 2 of the answer in the markscheme are acceptable.

(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]



Own figure rule applies.

[4 marks]

The break-even graph is drawn accurately and neatly, all relevant points are shown and total revenue, total costs and fixed costs are labelled.

[2 to 3 marks]

The break-even graph is drawn as essentially correct. Award [3 marks] if there are two errors in labelling (break-even points not marked or no title). Award [2 marks] if the diagram is untidy, if the variable cost and fixed cost curves are missing or a ruler has not been used.

[1 mark]

A poorly drawn diagram with more than three labelling or omission errors. There is some limited understanding of break-even level of output.

If a candidate draws up a table rather than drawing a break even graph then award 0 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]

The break-even point and calculations are useful tools to guide an entrepreneur in deciding whether to adopt a *Tommy the Baker* franchise. The break-even point is less than half the current level of output and the contribution is over 2/3 the selling price. The margin of safety is considerable given the current level of output. The business seems to be successful.

However, we need to consider that:

- further market research may need to be carried out if the franchise is to develop in overseas markets
- the success of *Tommy the Baker* may attract in new firms and this could dent the rosy profit scenario
- given the fast growth of the business will Tommy be able to manage this change with only a limited number of staff (dangers of overtrading)
- it would be dangerous just to rely on the break-even figures alone. It should act as a prompt to consider other financial figures.

[7 to 8 marks]

A balanced discussion of the uses of and limitations of break-even analysis as the only source of information. There is good use of the stimulus and calculations. For **[8 marks]** there may be a judgment that further sources of information will be needed.

[5 to 6 marks]

There is a discussion although lacking in detail that break-even analysis alone cannot be relied upon. The discussion may be unbalanced. There is relevance to *Tommy the Baker*. If no supporting calculations or use is made of the stimulus material award no more than **[5 marks]**.

[3 to 4 marks]

The analysis is one-sided, limited and not relevant to *Tommy the Baker*. For **[3 marks]** the answer may only consider the benefits of break-even analysis.

[1 to 2 marks]

The answer is brief, descriptive and generalized.
