



MARKSCHEME

May 2012

BUSINESS AND MANAGEMENT

Standard Level

Paper 2

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The markbands on pages 3–4 should be used where indicated in the markscheme.

Section A		Section B			Level descriptors
Q1 (d)	Q2 (e)	Q3 (c)	Q4 (c)	Q5 (d)	
Marks 0–5					
0					<ul style="list-style-type: none"> • No knowledge or understanding of relevant issues, concepts and theories. • No use of appropriate terminology.
1–2					<ul style="list-style-type: none"> • Little knowledge and understanding of relevant issues, concepts and theories. • Little use of appropriate terminology. • No reference is made to the information in the stimulus material. The response is mainly theoretical.
3–4					<ul style="list-style-type: none"> • A description or partial analysis/examination with relevant knowledge and/or understanding of relevant issues, concepts and theories. • Some use of appropriate terminology. • Some reference is made to the information in the stimulus material, not just to the name of the organization.
5					<ul style="list-style-type: none"> • A balanced analysis/examination with accurate, specific well-detailed knowledge and understanding of relevant issues, concepts and theories. • An analysis/examination that uses appropriate terminology throughout the response. • Explicit references are made to the information in the stimulus material.

Section B			Level descriptors
Q3 (d)	Q4 (d)	Q5 (e)	
Marks 0–7			
0			<ul style="list-style-type: none"> • No knowledge or understanding of relevant issues, concepts and theories. • No use of appropriate terminology.
1–2			<ul style="list-style-type: none"> • Little knowledge and understanding of relevant issues, concepts and theories. • Little use of appropriate terminology. • No evidence of judgments and/or conclusions. • No reference is made to the information in the stimulus material.
3–4			<ul style="list-style-type: none"> • A description with some knowledge and/or understanding of relevant issues and concepts. • Some use of appropriate terminology. • No evidence of judgments and/or conclusions. • Some reference is made to the information in the stimulus material, not just to the name of the organization. • The response is mainly theoretical.
5–6			<ul style="list-style-type: none"> • A response with relevant knowledge and understanding of relevant issues, concepts and theories. • A response that uses relevant and appropriate terminology. • Evidence of judgments and/or conclusions that are little more than unsubstantiated statements that has balanced analysis and demonstrates understanding. • Explicit references to the information in the stimulus material are made at places in the response.
7			<ul style="list-style-type: none"> • A response with accurate, specific well-detailed knowledge and understanding of relevant issues, concepts and theories. • A response that uses appropriate terminology competently throughout the response. • A response that includes judgments and/or conclusions that is well supported and underpinned by a balanced analysis. • Explicit references to the information in the stimulus material are made throughout the response.

SECTION A

1. (a) Describe *two* below the line promotion methods that Roberto could use. [4 marks]

Below the line promotional methods that *AH* could use include:

- Direct mail could be used to inform customers about delivery services, contact details, menu, prices and promotions.
- Leaflets and 2 for 1 offers could be handed out in the neighborhood of the restaurant. *AH* could offer 2 for 1s either promoted on the leaflets, or at point-of-sale, or through other means.
- Loyalty programs for frequent customers could be introduced to allow special discounts or free meals after a number of visits. These could also encourage brand loyalty and provide *AH* with a database that could be used for further promotions.
- Birthday clubs, special date promotions and refer-a-friend tactics could be set up to increase the number of customers.
- Selling internal merchandising such as special barbeque utensils and aprons with the restaurant’s logo/name to enhance brand awareness.
- *Accept any other relevant below the line promotion method described.*

Award [1 mark] for each correct and relevant below the line promotion method identified up to a maximum of [2 marks]. Award an additional [1 mark] for a relevant description of each method identified up to a maximum of [2 marks].

(b) Calculate for *AH* for each month (show all your working):

(i) other employee salaries (figure X) and hence the break-even level of output. [2 marks]

Other employee salaries (X) = 500 + (350 × 2)

Fixed costs = 200 + 500 + 400 + 500 + (350 × 2) + 150 = US\$2450

Contribution per meal = sales price – variable cost per meal
= 10 – 8 = US\$2

Break-even level of output = $\frac{\text{fixed costs}}{\text{contribution per meal}} = \frac{2450}{2} = 1225$

Award [1 mark] for the correct workings and [1 mark] for the correct answer.

(ii) **the margin of safety.** *[2 marks]*

Margin of safety = current level of output – break-even level

$$\text{Margin of safety} = 30 \times 100 - 1225 = 1775 \text{ meals}$$

Apply Own Figure Rule (OFR).

Award *[1 mark]* for the correct workings and *[1 mark]* for the correct answer.

(iii) **the profit or loss at the current level of meals served.** *[2 marks]*

Method 1

Revenue	3000 meals at US\$10 per meal	30 000
Variable costs	3000 meals at US\$8 per meal	-24 000
Fixed costs		<u>-2450</u>
Profit		3550

$$\text{Profit} = \text{US\$}3550$$

Method 2

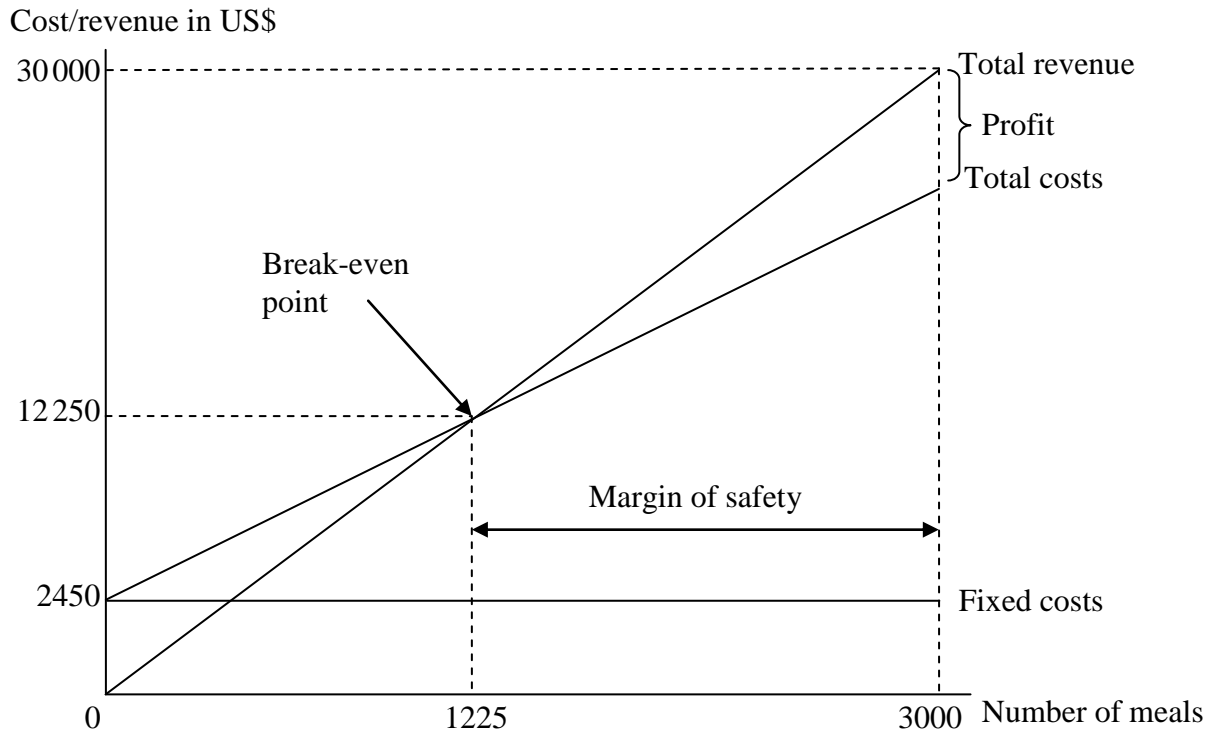
$$\begin{aligned} \text{Profit} &= \text{margin of safety} \times \text{contribution} \\ &= 1775 \text{ meals} \times 2 \\ &= \text{US\$}3550 \end{aligned}$$

Apply Own Figure Rule (OFR).

Award *[1 mark]* for the correct workings and *[1 mark]* for the correct answer.

(c) Construct a fully labelled break-even chart for AH.

[5 marks]



Award marks as follows:

- [1 mark] for each appropriately labelled axis – up to a maximum of [2 marks].
- [1 mark] for an appropriately drawn and labelled total revenue curve.
- [1 mark] for an appropriately drawn and labelled total cost curve.
- [1 mark] for the identification of the break-even level of output.

Award [0 marks] if a candidate produces a table, and award no more than [3 marks] if the chart is not neat, not drawn with a straight-edge, or is not to scale.

Ideally, the candidate will draw an arrow pointing to the break-even point and label the arrow. However, accept as an “appropriately labelled” break-even point a vertical line from the x-axis to the break-even point provided that the line is labelled “break-even point”.

- (d) **Using the position map, analyse how *AH* can differentiate itself from its main competitors.** [5 marks]

Roberto has constructed a position map to determine where his restaurant stands vis-à-vis the other competing restaurants in the street. According to the position map, *AH* is competing with restaurants A, B and C in the high quality high priced segment, meanwhile restaurant D is all alone in the economy segment offering an inferior service.

The map suggests that *AH* has a distinct position in the market. On the one hand, restaurant B is perceived as offering services with the same quality than *AH* but at a higher price. Restaurant C on the other hand, is perceived as offering services at the same price than *AH* but with a lower quality. Restaurant A in turn, is perceived as providing better quality services but substantially more expensive.

Roberto could design his future promotions so as to emphasize *AH*'s distinct position in the market. His restaurant is perceived as offering good quality service for good value for money. Future promotions could aim at showing that his restaurant is cheaper than competitor B for the same service quality, and better quality service than competitor C for the same price.

Another option for *AH* is to try to change its market position to a “less crowded” position to differentiate more effectively from restaurants B and C. It could aim at the premium segment such as restaurant A, or inversely, at the economy segment like restaurant D. However, these alternatives would imply competing with restaurants A or C which are already positioned in their market segments. It could also entail several risks such as losing customers or drastic changes to the restaurant's image.

Roberto should then take advantage of *AH*'s current position to deepen its differentiation over its competitors. Future promotions should emphasize *AH*'s distinct position on quality service and price.

Accept any other substantiated analysis.

Marks should be allocated according to markbands on page 3.

2. (a) **Identify *two* advantages and *two* disadvantages of changing the legal structure of *BS* to a private limited company.** **[4 marks]**

Advantages could include:

- shareholders have limited liability
- capital can easily be raised by having more shareholders
- control of the business cannot be lost as all shareholders must agree to sell to new shareholders
- the business will continue even if one of the owners dies.

Disadvantages could include:

- profits must be shared among shareholders
- the legal costs of setting up this type of organization
- shares cannot be sold to the public
- financial information becomes public.

N.B. Some candidates may say that control of ownership could be lost even if this is actually not the case in the scenario of this stimulus. If the business changes from a sole trader to a private limited company, Aroon can control the sale of shares such that he will always have a controlling interest in the company.

Accept any other relevant advantage or disadvantage.

Mark as 2 + 2.

Award **[1 mark]** for each correct and relevant advantage identified up to a maximum of **[2 marks]** and **[1 mark]** for each correct and relevant disadvantage identified up to a maximum of **[2 marks]**.

- (b) **Assuming shrimp prices remain at current high levels, calculate for the new shrimp boat (*show all your working*):**

- (i) **the payback period (without depreciation).** **[2 marks]**

$$\frac{175\,000}{35\,000} = 5 \text{ years}$$

Award **[1 mark]** for the correct working and **[1 mark]** for the correct answer.

- (ii) **the average rate of return (ARR) over a seven-year period.** **[2 marks]**

$$\text{Total net return over 7 years} = 245\,000 - 175\,000 = 70\,000$$

$$\text{Average annual net return} = \frac{70\,000}{7} = 10\,000$$

$$\text{ARR} = \frac{10\,000}{175\,000} \times 100 = 5.71\% \text{ to 2 d.p.}$$

Award **[1 mark]** for the correct working and **[1 mark]** for the correct answer.

(c) Assuming shrimp prices return to their pre-2011 levels *two years after BS* acquires the new shrimp boat, calculate (*show all your working*):

(i) the payback period (without depreciation). [2 marks]

$$175\,000 - 35\,000 (\text{year 1}) - 35\,000 (\text{year 2}) = 105\,000$$

$$\frac{105\,000}{10\,000} = 10.5 \text{ years}$$

$$2 \text{ years} + 10.5 \text{ years} = 12.5 \text{ years or } 12 \text{ years and } 6 \text{ months}$$

Award [1 mark] for the correct working and [1 mark] for the correct answer.

(ii) the average rate of return (ARR) over a seven-year period. [2 marks]

$$\text{Profit over seven years} = 35\,000 \times 2 + 10\,000 \times 5 = 120\,000$$

$$\text{Net profit} = 120\,000 - 175\,000 = -55\,000$$

$$\text{Average annual net return} = \frac{-55\,000}{7} = -7857.14 \text{ to } 2 \text{ d.p.}$$

$$\text{ARR} = \frac{-7857.14}{175\,000} \times 100 = -4.49\% \text{ to } 2 \text{ d.p.}$$

Award [1 mark] for the correct working and [1 mark] for the correct answer.

- (d) **Comment on the results of your investment appraisal calculations in parts (b) and (c).** **[3 marks]**

Allow candidate own figure rule (OFR) based on their calculations to parts (b) and (c).

The results of the investment appraisal calculations indicate that, if shrimp prices remain high, purchasing a new boat will be a positive investment. The payback period of 5 years is also a short period of time, especially since Aroon believes that the useful life exceeds 7 years. If, after 2 years, prices fall to their pre-2011 levels, the investment becomes negative. The payback on the loan now extends to 12.5 years, which means that the boat would not be paid for until after his retirement.

Accept any other relevant comment.

[1 mark]

A general or limited response.

[2 marks]

The candidate's response is somewhat general (the candidate does not support the answer with specific references to the rates of return and payback periods), or too optimistic (the candidate does not make some commentary on the problematical nature of projections, which tends to be optimistic and which cannot anticipate the unexpected).

[3 marks]

The candidate's response makes specific references to the rates of return and payback periods. The candidate also makes some commentary on the problematical nature of projections, which tends to be optimistic and which cannot anticipate the unexpected.

- (e) **Using Maslow's hierarchy of needs theory, analyse Aroon's motivation to acquire the additional shrimp boat.**

[5 marks]

The acquiring of an additional shrimp boat is a difficult decision for Aroon and his family. If shrimp prices remain high for several years, the boat can be paid off quickly.

There are risks to the move. If shrimp prices return to pre-2011 levels quickly, Aroon could be paying for the boat for many years. He would have to renegotiate the loan, and his bank may not be happy with this situation and could raise the interest rate. It could also mean that Aroon and Kanya have to delay their retirement, which they may not want to do and for Aroon this may cause difficulties given the physical demands of shrimping. Why would he want to take a risk of jeopardizing the comfort and prosperity he currently enjoys to buy another boat? Why does he just not enjoy the post-2011 profits and bank as much money as possible until shrimp prices fall to pre-2011 levels?

According to Maslow, humans must first satisfy their physiological needs then their safety needs, and then their need for love and belonging. Aroon has met these needs – he runs a profitable business with his wife. The explanation for risk taking could well lie in the next stages of Maslow's hierarchy: the need to gain the respect and esteem of others and, finally, self-actualization – the realization of full potential. Perhaps Aroon wants to see his standing in the shrimping community go up, which it certainly would if he successfully increased his fleet. Other shrimpers would believe him to be a successful businessman and Aroon himself would feel not merely competent but successful.

Given the risks he is considering, though, the motivation may even be greater. For Aroon, self-actualization, reaching his full potential (in his eyes) may be not merely providing for his family now, but also in providing for the future of his sons and their families by leaving each son his own boat.

Accept any other relevant analysis.

Marks should be allocated according to markbands on page 3.

SECTION B

3. (a) **Identify *two* features of quality control.** **[2 marks]**

Features of quality control could include:

- it is a set of procedures intended to ensure a certain level of quality in a product or service
- it emphasizes testing of products to uncover defects
- it is product orientated instead of process orientated
- quality control activities are usually performed after the production has been completed
- it is reactive rather than proactive
- *accept any other relevant feature.*

N.B. Some candidates may define quality control. If in their definition, two appropriate features are identified, award marks for identification of those features.

Award **[1 mark]** for each correct and relevant feature of quality control identified up to a maximum of **[2 marks]**.

- (b) **Explain *one* advantage and *two* disadvantages to *Hands* of using a piece rate rewards package for its workers.** **[6 marks]**

A piece rate reward package (scheme) is such that workers are paid purely on results.

Advantages for *Hands* could include the following:

- It could increase motivation among workers and therefore increase productivity.
- It helps to reward extra productivity. This means that efficient and fast craftswomen who make an extra effort will be rewarded for it.
- It allows some labour costs flexibility. If the business faces a downturn in sales, labour cost can be easily adapted to the circumstances as craftswomen are only paid if they produce.
- *Accept any other relevant advantage.*

Disadvantages for *Hands* could include the following:

- Craftswomen may worry about losing pay if production and sales are lowered.
- The quality of knitted items could be affected as workers mainly focus on production. This could negatively affect sales and threaten *Hands*' permanence in sophisticated and competitive markets.
- It could be more complicated to administrate than other payment schemes, as each craftswoman will see its wage calculated every payroll. This could lead to an increased administrative cost for the business.
- Innovation and group work could be discouraged as the worker's main focus is quantity produced. This can particularly affect a business in the fashion industry like *Hands*, where creation of new designs is essential.
- *Accept any other relevant disadvantage.*

Mark as 2+2+2.

[2 marks] are awarded for **one** advantage and [4 marks] are awarded for **two** disadvantages.

Award [1 mark] for each correct and relevant advantage/disadvantage identified. Award an additional [1 mark] for a relevant explanation of the advantage/disadvantage up to a maximum of [6 marks].

- (c) **Analyse two challenges that *Hands* may have faced entering into international markets.** [5 marks]

The entrance into international markets may have placed several challenges on *Hands*.

For example:

- *Hands* may have faced strong competition from other hand knitting companies from India, New Zealand and Uruguay wanting to reach the same markets. However, the usage of high quality raw materials and exhaustive quality controls methods may have helped *Hands* to finally access those markets.
- Additional working capital to expand internationally and to develop new distribution channels may have been difficult to find. This may have been solved through government grants, or financial support from international institutions helping small businesses in developing countries.
- Entering into international markets implied that some workers were given managerial authority; these organizational changes may have caused concern over workers and may have led to de-motivation and/or conflict among them. However, craftswomen's loyalty to *Hands* may have helped to cope with these challenges.
- Exchange rate fluctuations between the Argentine Peso and the Euro and the US\$, may affect sales and profitability.
- *Hands* may have faced problems when contacting important clients overseas and when bridging cultural and language barriers. Agents in the target countries where *Hands* was willing to export may have been contacted for this purpose.
- *Hands* may have faced additional innovation costs to introduce new knitting techniques and designs. It is possible that *Hands* may have contacted national and international designers to develop new products to meet the needs of top fashion markets.
- *Hands* may have adapted its scale of production to an increasing demand so as to be able to meet orders in the time and quality required. This may have been solved by hiring specialist or external consultants that may have helped *Hands* to adapt to its new position.

Accept any other relevant challenge and analysis.

Marks should be allocated according to the markbands on page 3.

- (d) **Evaluate the effectiveness of the democratic leadership style of the partners at *Hands*.** [7 marks]

In a democratic leadership style workers are involved in the decision-making processes of the business; that is, consultation and collaboration are considered central elements.

- The collaborative environment created by a democratic leadership style could have resulted in better solutions to the challenges that the business had to face over the years, such as lack of finance and economic recessions.
- A democratic leadership style could have also enabled the sense of belonging and loyalty of craftswomen and thus increase motivation among them.
- A democratic leadership style probably enabled the sharing of ideas, designs, and knitting techniques which could have led to the success of *Hands*' products in international markets.

On the other hand:

- A democratic leadership style could have negatively affected the efficiency of the business by slowing down the decision-making processes. As the business employs around 300 craftswomen, coordination and cooperation although valuable, may have been chaotic, time consuming and therefore costly. Reaching a consensus over decisions may have been difficult.
- It is highly probable that most craftswomen belonging to *Hands* lacked managerial skills. For urgent decisions in challenging times, the democratic leadership style may have been inappropriate.

Hand's survival over the years and its current success seem to show that the application of a democratic leadership style was effective. Such success is clearly crystallized in the achievement of *Hand's* challenges in entering into the world's most demanding markets despite fierce competition.

Accept any other relevant evaluation.

If the response is a one-sided relevant approach with no evaluation award a maximum of [4 marks].

Marks should be allocated according to the markbands on page 4.

4. (a) **Identify *two* features of e-commerce.** **[2 marks]**

Features of e-commerce include:

- 24/7
- lowers transaction costs
- worldwide
- universal standards
- interactivity
- personalization
- customization
- *accept any other relevant feature.*

[Source: adapted from www.cs.siena.edu, 6 March 2011]

N.B. A comment along the lines of “customers buy products over the Internet” is not a feature of e-commerce but rather a definition. For credit as a feature, the candidate must say something along the lines of “24/7”, “worldwide” *etc.*

Award **[1 mark]** for each correct feature of e-commerce identified up to a maximum of **[2 marks]**.

(b) **Explain *two* ways *PF* practices corporate social responsibility.** **[6 marks]**

PF practices corporate social responsibility when, beginning in 2007, it introduced organic cotton T-shirts to its brand line. The cotton in these shirts meets rigorous organic certification standards and the T-shirts are made without the use of environmentally harmful chemicals. This shift to environmentally friendly products is one form of corporate social responsibility.

Another is the fact that these products are cut and sewn in manufacturing facilities committed to socially responsible practices. Presumably *PF* could have the manufacturing done in factories in developing nations, where workers are often poorly paid and overworked but which, nevertheless, can produce the product for less than those factories that practice social responsibility towards its employees.

A final way that *PF* practices corporate social responsibility is the fact that the company makes donations to several organizations committed to environmental protection. Although doing so strengthens *PF*'s brand identity, it could strengthen its identity by other means, which does not include charitable contributions.

Accept any other relevant explanation.

Mark as 3+3.

For identification of an appropriate way *PF* practices corporate social responsibility, award **[1 mark]**. Award **[2 marks]** for partial, appropriate explanations, and **[3 marks]** for thorough, appropriate explanations. Award a maximum of **[6 marks]**.

(c) Analyse the benefits of *two* methods of distribution of *PF*'s products. [5 marks]

The stimulus identifies three forms of distribution:

1. the Internet (e-commerce)
2. retail stores
3. mobile retail stores –vans.

The benefits of using the Internet is that it is inexpensive, provides worldwide access, and can be easily adapted as new products are introduced and old ones phased out. *PF*'s customer base is young people, who are not intimidated by the Internet and who, ever more frequently, have Internet access via their mobile phones. A major part of *PF*'s marketing strategy is to project a hip, somewhat Bohemian image, which *PF* can manage via its web site.

Retail stores have certain benefits that the web page does not. Like the web page, retail stores can through décor and people shape an image that strengthens the *PF* brand. Unlike the web, sales representatives can develop a rapport with customers that can enhance sales. Also, customers can touch, feel, and try on the products. A drawback to retail stores is that they are expensive – rent, decorations/furnishings, and salaries and wages.

The mobile retail concept allows *PF* to target events and venues where young people go with fewer expenses than a fixed retail store. With the mobile retail stores, buyers can touch and feel the products. Vans can be on location for the duration of the time young people are there – in the summer for theme parks, for one night in the event of concerts – but the company does not have to support a store during times when young people are not there.

Accept any other relevant analysis.

To achieve more than [3 marks] the benefits of two methods of distribution need to be analysed.

Marks should be allocated according to the markbands on page 3.

(d) Discuss the importance and role of branding for PF.

[7 marks]

Branding is crucially important to *PF* – except for its products made from organic cloth (and there are many labels made only from organic cloth) the only thing separating its products from many other vendors is the concept and look of the frog and the peace sign. *PF* has carefully crafted an image of products for the socially aware, environmentally conscious young person committed to peace. As long as the constellation of values is associated with the brand, *PF* can add products and lines as other products, such as the flag shorts, go into decline.

In a general sense, branding provides many benefits to a company: branding can help create loyal customers, differentiate the product (even if only a perception of difference), and can give the company pricing flexibility – loyal customers will pay more to have the brand. Presumably, *PF* enjoys all of these benefits.

One element of branding that is crucially important is the image of the “peace frog”. It helps potential customers and potential return customers quickly identify the maker of the product when they see someone wearing a *PF* product.

There is a negative side to a strong brand identity. If one of its products has problems, the problem product can affect the entire brand. In addition, *PF* appeals to a certain type of person – someone who is environmentally aware, “politically correct,” and perhaps a bit Bohemian or “hippy”. As the brand identity strengthens, *PF* might not attract potential customers who do not identify with this image.

Accept any other relevant discussion.

Marks should be allocated according to the markbands on page 4. If no negative aspects of branding are addressed, award a maximum of **[4 marks]**.

5. (a) Define the term *product life cycle*.

[2 marks]

Any product introduced to a market typically goes through six sequential stages: development, introduction, growth, maturity, saturation, and decline. The term product life cycle refers to the full cycle of the different stages in the life of a product and the anticipated sales volume at each stage.

N.B. Not all sources list six stages to the product life cycle. Some list only five and do not have saturation. A good definition for full marks does **not** have to include saturation.

Candidates are **not** expected to word their definition **exactly** as above.

Award **[1 mark]** for a basic definition that conveys partial knowledge and understanding.

Award **[2 marks]** for a full, clear definition that conveys knowledge and understanding similar to the answer above.

For **only** a relevant: example **or** application to the stimulus award **[1 mark]**.

(b) Calculate:

- (i) the 2011 stock turnover in days at MOS.**

[1 mark]

Stock turnover is calculated with the formula:

$$\frac{\text{Average stock}}{\text{Cost of goods sold}} \times 365 = \text{stock turnover in days}$$

$$\frac{608000}{50\% \times 12000000} \times 365 = 37 \text{ (36.99 to 2 d.p.) days}$$

Award **[1 mark]** for the correct answer.

- (ii) the 2011 stock turnover in days for typewriters.**

[2 marks]

The stock turnover for typewriters can be calculated with the information given:

$$\frac{43000}{40\% \times 120000} \times 365 = 327 \text{ (326.98 to 2 d.p.) days}$$

Award **[2 marks]** for the correct answer. **[1 mark]** can be awarded for working if the answer is incorrect.

- (c) **Explain how the slow turnover of typewriters contributes to the liquidity problem of *MOS*.** **[3 marks]**

On average, stock at *MOS* turns over rather quickly. For all products it turns over in 37 days. One product segment where that is not the case is typewriters, which make up only a small percentage of *MOS*' sales (3% in 2009 and 1% in 2011). Typewriters turnover in 327 days, which means that *MOS* has funds invested in typewriters that sit on the shelves a long time before selling. Thus, despite the fact that the gross profit margin on typewriters (60%) is better than average (50%), the company has considerable funds tied up in stock, weakening the company's liquidity position. If *MOS* could reduce its stock inventory on typewriters to 30 days, the company's average inventory balance would be \$39 000 lower, freeing up those funds for other uses.

Accept any other relevant explanation.

Apply Own Figure Rule (OFR).

[1 mark]

A general or limited response.

[2 marks]

The candidate's response indicates some understanding that increases in stock turnover increases funds tied up in stock, thus worsening liquidity, and that a decrease in stock turnover reduces the amount of funds invested in stock, thus freeing up funds for other uses.

[3 marks]

The candidate's response indicates a clear understanding that increases in stock turnover increases funds tied up in stock, thus worsening liquidity, and that a decrease in stock turnover reduces the amount of funds invested in stock, thus freeing up funds for other uses. The candidate supports these assertions with specific references to stock amounts and turnover periods.

- (d) Analyse *MOS*' product portfolio by applying the Boston Consulting Group (BCG) matrix. [5 marks]

The BCG matrix provides some insight into the product mix at *MOS*. Of the four categories of products (star, cash cow, problem child, and dog), two of *MOS*' products are clearly identifiable:

Personal computers (PCs) are cash cows: *MOS* sells many PCs, and PC sales are declining slightly (suggesting saturation of the market). In general, in developed countries or markets such as Santiago, PC sales reached the top of the product life cycle in the first decade of the twenty first century. Then, sales shifted to replacement rate. If *MOS* wants to continue to grow, it will have to find new products.

Typewriters are *MOS*' dog: the company sells very few typewriters, and the market is contracting. While *MOS* probably has a specialty market segment at this point in typewriters – they are probably very hard to find in Santiago – the company should question whether to continue to offer them: they take up a lot of *MOS*' stock for very few sales.

The other two products *MOS* sells modern mobile telephones and portable DVD players are harder to categorize. Modern mobile telephones are probably a “problem child” for the company. They are one of the most rapidly changing technologies today, and they represent an enormous growth potential for *MOS*. However, modern mobile telephones make up only a small percentage of *MOS*' sales. This problem with sales may stem from image problems: known as an office machine company, *MOS* may not attract many young customers, or those seeking only modern mobile telephones. In this instance, the idea to change the name and image of the company would make sense. That way, *MOS* could start to sell more modern mobile telephones.

Portable DVD players are also difficult to place. While *MOS* did experience solid sales growth with them from 2010 to 2011, the technology may soon be eclipsed by video streaming to devices such as personal computers, tablets (such as *Apple* iPads), and even modern mobile telephones. Thus, despite the solid sales, it may be too much to categorize them as stars and may be best to suggest that they are soon to be cash cows: products at the top of the product life cycle.

Accept any other relevant application and analysis.

If a candidate correctly draws the BCG matrix and places *MOS*' products in it, identifying PCs as “cash cows” and typewriters as “dogs”, but otherwise does not have a written analysis, award [1 mark]. If the candidate does not refer to the BCG matrix at all, award [0 marks].

Marks should be allocated according to the markbands on page 3.

- (e) **Discuss Maria’s plans to stop selling typewriters and to change the name of *MOS*.** *[7 marks]*

Maria’s plans for the business are driven by need (the liquidity problem) and by her desire to update the image of the company. By eliminating typewriters from the product line, she will be able to invest those funds currently invested in typewriters into items such as modern mobile telephones, portable DVD players, and personal computers, that turnover faster. She will also be able to give the business a fresher, newer look as typewriters, which are rarely used and have an outdated feel about them, will be removed from the shelves. These changes, coupled with the name change and, presumably, a new logo and business look, will give *MOS* a more modern feel. These kinds of changes can invigorate a business by attracting new customers and getting existing customers to consider new types of products and services.

Her father, however, has reason to be concerned. One of the strengths of the business is its long-standing ties with the Santiago business community. Some of those loyal customers still use typewriters. If *MOS* no longer supplies them, these customers might start going to other office supply stores, giving *MOS*’ competition an opportunity to establish relationships with some of *MOS*’ oldest customers. At the least, these customers will feel slighted and feel that their business is less meaningful to *MOS* than previously. Moreover, these changes to the business may not immediately resolve the liquidity problem. Just to move out the typewriters, *MOS* may have to sell them at deep discounts, lowering their current above-average profitability. Changing the name and signs (and probably the logo) will be expensive, and there will be some disruption in the business community, unless *MOS* introduces the changes with an extensive marketing campaign, which will also involve expenses.

Accept any other relevant discussion.

Marks should be allocated according to the markbands on page 4.
