1.2 The Boston Matrix and Product Portfolio Analysis

Total Marks

AQA 7132 · Calculators not allowed · about 45 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer ALL questions in the spaces provided. At least two questions require full-sentence answers. Riverside Drinks, a fictional small beverage firm used in parts of this pack, appears where indicated.

1 Which one of the following best describes the vertical axis of the Boston Consulting Group (BCG) matrix used in product-portfolio analysis?

- ☐ A) Relative market share compared with the largest rival
- ☐ B) Product life-cycle stage from introduction to decline
- ☐ C) Market growth rate for the product's market
- ☐ D) The product's contribution per unit

(Total for Question 1 is 1 mark)

---

2 Which one of the following best describes the horizontal axis of the BCG matrix?

- ☐ A) Market growth rate
- ☐ B) Relative market share compared with the largest rival
- ☐ C) The business's total market share summed across all its products
- ☐ D) The product's profit margin

(Total for Question 2 is 1 mark)

---

3 Define the BCG quadrant term 'star' as used in product-portfolio analysis, giving the quadrant's market growth and relative market share characteristics.

(Total for Question 3 is 1 mark)

4 Define the BCG quadrant term 'cash cow' as used in product-portfolio analysis, giving the quadrant's market growth and relative market share characteristics.

(Total for Question 4 is 1 mark)

5 Define the BCG quadrant term 'problem child' (also called 'question mark') as used in product-portfolio analysis, giving the quadrant's market growth and relative market share characteristics.

(Total for Question 5 is 1 mark)

6 Define the BCG quadrant term 'dog' as used in product-portfolio analysis, giving the quadrant's market growth and relative market share characteristics.

(Total for Question 6 is 1 mark)

7 Which BCG quadrant is typically described as 'generating more cash than it needs', providing funds to other parts of the portfolio?

- [ ] A) Star
- [ ] B) Cash cow
- [ ] C) Problem child / question mark
- [ ] D) Dog

(Total for Question 7 is 1 mark)

8 Which strategic action is most commonly recommended for a product in the 'star' quadrant when it is starting to deliver strong market share in a high-growth market?

- ☐ A) Divest or sell the product quickly
- ☐ B) Harvest with minimal further investment
- ☐ C) Invest to build and support further growth
- ☐ D) Ignore and leave to the market

(Total for Question 8 is 1 mark)

---

9 State one possible strategic option a firm might take for a problem child (question mark) product in its portfolio.

(Total for Question 9 is 1 mark)

---

10 State one piece of data a business must estimate correctly for its BCG analysis to be useful when comparing products across markets.

(Total for Question 10 is 1 mark)

---

11 State one limitation of using the BCG matrix for product-portfolio decisions in a real business context.

(Total for Question 11 is 1 mark)

12 State one reason why a firm might keep a dog in its portfolio rather than divesting it immediately.

(Total for Question 12 is 1 mark)

---

13 Riverside Drinks, a fictional small beverage firm, sells four products: Sparkle soda, River still water, Zest energy shot and Calm herbal tea. Market research shows: Sparkle's market is growing fast and Riverside holds 60% share while the largest rival has 30% share; River water's market growth is slow and Riverside has 60% market share while the largest rival has 35% share; Zest's market is growing quickly but Riverside has 5% share while the market leader has 70% share; Calm tea's market is flat and Riverside has 3% share while the biggest rival has 50% share.

Calculate Riverside's relative market share for Sparkle and for Zest, expressing each as Riverside's share divided by the largest rival's share (give answers to two decimal places). Show your working.

(Total for Question 13 is 2 marks)

14 Classify each of Riverside Drinks' four products (Sparkle, River, Zest, Calm) into the correct BCG quadrant based on the information in question 13. Justify your classification for each product, linking the market growth and relative market share data to the quadrant chosen.

(Total for Question 14 is 6 marks)

15 Evaluate the value of the Boston Consulting Group (BCG) matrix to a business managing its product portfolio. In your answer consider both the benefits and the limitations of the matrix and reach a justified conclusion.

(Total for Question 15 is 14 marks)

Mark scheme · 1.2 The Boston Matrix and Product Portfolio Analysis

Question 1

C cao **B1**

Answer: C

Question 2

B cao **B1**

Answer: B

Question 3

a product with high market growth and high relative market share **B1**

Answer: A product with high market growth and high relative market share.

Question 4

a product with low market growth but high relative market share **B1**

Answer: A product with low market growth but high relative market share.

Question 5

a product with high market growth but low relative market share **B1**

Answer: A product with high market growth but low relative market share.

Question 6

a product with low market growth and low relative market share **B1**

Answer: A product with low market growth and low relative market share.

Question 7

B cao **B1**

Answer: B

Question 8

C cao **B1**

Answer: C

Question 9

invest to build market share, or try to grow it into a star; or divest/sell if prospects are poor **B1**

Answer: For example, invest to build market share in the high-growth market so it becomes a star, or divest if the business decides the product is not worth further investment.

Question 10

accurate market growth rate estimates, or accurate market share data for the product and the market leader **B1**

Answer: Accurate market growth rates or accurate market share figures for the product and the market leader are essential for a useful BCG analysis.

Question 11

it oversimplifies by using only two dimensions, ignoring factors like customer loyalty, product synergies or profitability differences **B1**

Answer: For example, the matrix is simplistic: it uses only market growth and relative share and ignores other important factors such as profitability, brand strength, or product synergies.

Question 12

it may provide strategic value such as completing the product range, supporting other products' sales, or serving a niche that is profitable enough **B1**

Answer: For example, the product may support the overall brand, help sell other products, serve a small but profitable niche, or be kept for strategic reasons such as blocking competitors.

Question 13

method: Riverside share divided by the largest rival's share for each product seen **M1**

2.00 and 0.07 cao to two decimal places **A1**

Answer: Sparkle: 60 / 30 = 2.00. Zest: 5 / 70 = 0.0714 -> 0.07.

Question 14

Sparkle classified as a star (high growth, high relative share since Riverside is the market leader) or reasoned justification linking high growth and a 2.00 relative share **B1**

River water classified as a cash cow (low growth, high relative share 60/35 approx 1.71, since Riverside is the market leader) or justification linking low growth and high share **B1**

Zest classified as a problem child/question mark (high growth, low relative share 0.07) or justification linking high growth and very low share **B1**

Calm tea classified as a dog (low growth, low relative share 3/50 = 0.06) or justification linking low growth and very low share **B1**

applies correct data from question 13 for at least two products to support classifications **B1**

applies correct data from question 13 for the remaining two products to support classifications **B1**

Answer: Suggested classifications: Sparkle = star (high growth, 60/30 = 2.00 relative share, Riverside is the market leader); River = cash cow (low growth, 60/35 = 1.71 relative share, Riverside is the market leader); Zest = problem child/question mark (high growth, 5/70 = 0.07 relative share); Calm = dog (low growth, 3/50 = 0.06 relative share). Each classification justified by linking growth rate and relative share.

Question 15

Level 1 Limited evaluation: makes simple, undeveloped points about the BCG matrix, perhaps listing a few advantages or limitations with little or no application to business decision-making and no clear judgement. **1-5**

Level 2 Clear evaluation: discusses several benefits and limitations, applies the ideas to portfolio decisions, and begins to weigh strengths and weaknesses, but the judgement is only partially developed. **6-10**

Level 3 Comprehensive evaluation: balances a range of benefits and limitations, applies them to realistic business contexts, develops chains of reasoning, and reaches a clear, justified conclusion about the overall usefulness of the BCG matrix. **11-14**

Indicative content:

- Benefits: forces managers to consider resource allocation across a portfolio, highlights products that generate cash (cash cows) to fund investment in high-growth prospects (problem children) or to support stars, and helps set broad strategy options such as build, hold, harvest or divest.
- Benefits: simple visual tool that is quick to communicate and can prompt useful strategic discussion about where to invest and where to cut losses.
- Limitations: reduces complex realities to two dimensions, ignoring important factors such as profit margins, product complementarities, brand strength, or long-term strategic fit.
- Limitations: relies on accurate market share and market growth measures which can be hard to estimate; market boundaries may be ambiguous and growth rates volatile.
- Limitations: the matrix is static and does not show momentum or the reasons behind a product's position, so it can mislead without complementary analysis such as cost structures or consumer trends.
- Application: examples of how a business might sensibly use the matrix alongside other tools, for instance using cash cow profits to fund marketing for promising question marks, or combining BCG with profitability analysis to avoid divesting a low-share but high-margin niche product.
- Judgement: a balanced conclusion might state that the BCG matrix is a useful starting point for portfolio thinking and resource allocation, but it should not be used alone; it is most valuable when combined with deeper financial and market analysis and when its limitations are recognised.