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GCSE · Marketing

BUS.MK3 Product and the product life cycle

AQA 8132 · Calculator allowed · about 60 minutes

Total Marks

Name: ________________________________ Date: ____ / ____ / ______

Answer ALL questions in the spaces provided. Show your working for every calculation: method marks are available even if your final answer is wrong. Orin Toys, used throughout this pack, is a fictional business.

1 Which one of the following best describes the 'product life cycle'?

- ☐ A) The stages a product's sales pass through, from launch to decline
- ☐ B) The time it takes a business to manufacture one unit of a product
- ☐ C) The length of a product's guarantee period
- ☐ D) The number of suppliers used to make one product

(Total for Question 1 is 1 mark)

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2 State the four main stages of the product life cycle, in order.

(Total for Question 2 is 4 marks)

3 Orin Toys, a fictional toy manufacturer, launched a new construction toy, Orin Blocks. The table shows units sold (thousands) each quarter after launch.

Q1	Q2	Q3	Q4	Q5
5	20	45	54	27

Using the sales pattern shown, identify the product life cycle stage that best matches each quarter.

(a) Q1 (5,000 units, the first quarter after launch). **(1)**

(b) Q2 to Q3 (sales rising sharply from 20,000 to 45,000 units). **(1)**

(c) Q4 (sales still rising, but only slightly, from 45,000 to 54,000 units). **(1)**

(d) Q5 (sales falling sharply from 54,000 to 27,000 units). **(1)**

(Total for Question 3 is 4 marks)

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4 Using the table in question 3, calculate the percentage change in Orin Blocks' sales from Q1 to Q2. Show your working.

(Total for Question 4 is 2 marks)

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5 Calculate the percentage change in Orin Blocks' sales from Q2 to Q3. Show your working.

(Total for Question 5 is 2 marks)

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6 Calculate the percentage change in Orin Blocks' sales from Q3 to Q4. Show your working.

(Total for Question 6 is 2 marks)

7 Calculate the percentage change in Orin Blocks' sales from Q4 to Q5. Show your working.

(Total for Question 7 is 2 marks)

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8 Explain what the 50% fall in sales calculated in question 7 suggests about Orin Blocks.

(Total for Question 8 is 2 marks)

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9 Explain one extension strategy Orin Toys could use to boost Orin Blocks' sales during the decline stage.

(Total for Question 9 is 3 marks)

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10 State two other examples of extension strategies a toy business could use.

(Total for Question 10 is 2 marks)

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11 Explain why launching a new product like Orin Blocks is a risky decision for Orin Toys, particularly during the introduction stage (Q1).

(Total for Question 11 is 3 marks)

12 Explain the link between the marketing mix and the product life cycle at the introduction stage, using Orin Blocks as an example.

(Total for Question 12 is 3 marks)

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13 Analyse why Orin Toys may need heavy promotional spending during introduction and growth (Q1 to Q3), but less during maturity (Q4).

(Total for Question 13 is 4 marks)

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14 Explain one risk to Orin Toys of not launching an extension strategy or new product once Orin Blocks reaches maturity.

(Total for Question 14 is 2 marks)

15 Orin Blocks' sales fell by 50% in Q5 (question 7), reaching 27,000 units. Orin Toys is deciding whether to launch an extension strategy for Orin Blocks now, or to discontinue it and invest instead in developing an entirely new toy.

Recommend which option Orin Toys should choose. Justify your answer using the sales and percentage change figures calculated in this pack.

(Total for Question 15 is 9 marks)

Mark scheme · BUS.MK3 Product and the product life cycle

Question 1

- **B1** A cao
- **Answer: A**

Question 2

- **B1** introduction
- **B1** growth
- **B1** maturity
- **B1** decline
- **Answer: Introduction, growth, maturity, decline.**

Question 3

- (a) **B1** introduction
- **(a) Answer: Introduction.**
- (b) **B1** growth
- **(b) Answer: Growth.**
- (c) **B1** maturity
- **(c) Answer: Maturity.**
- (d) **B1** decline
- **(d) Answer: Decline.**

Question 4

- **M1** ((20 - 5) / 5) x 100 seen
- **A1** 300% increase cao
- **Answer: A 300% increase.**

Question 5

- **M1** ((45 - 20) / 20) x 100 seen
- **A1** 125% increase cao
- **Answer: A 125% increase.**

Question 6

- **M1** ((54 - 45) / 45) x 100 seen
- **A1** 20% increase cao
- **Answer: A 20% increase.**

Question 7

- **M1** ((27 - 54) / 54) x 100 seen
- **A1** 50% decrease (-50%) cao
- **Answer: A 50% decrease.**

Question 8

- **B1** identifies that demand for Orin Blocks is falling sharply
- **B1** links this to the product life cycle, e.g. suggesting it has entered the decline stage, possibly because customers are moving to newer or rival toys
- **Answer: Demand for Orin Blocks is falling sharply, suggesting the product has entered the decline stage, possibly as customers move to newer or rival toys.**

Question 9

- **B1** identifies an extension strategy, e.g. launching a new colour range or a themed special edition
- **B1** develops how it works, e.g. this gives existing and new customers a reason to buy again
- **B1** links to the outcome, e.g. lifting sales back up rather than letting them keep falling toward zero
- **Answer: Launching a themed special edition gives existing and new customers a reason to buy again, lifting sales back up rather than letting them keep falling toward zero.**

Question 10

- **B1** any one extension strategy, e.g. reducing the price
- **B1** any second distinct extension strategy, e.g. finding new markets/customers, adding new features, increasing promotion
- **Answer: Any two, e.g. reducing the price and finding new markets abroad.**

Question 11

- **B1** identifies a risk, e.g. high development and launch costs (research, tooling, initial promotion)
- **B1** links to low sales, e.g. shown by the low Q1 figure of 5,000 units, before customer awareness builds
- **B1** links to the financial consequence, e.g. the business may make a loss in this stage before the product becomes profitable
- **Answer: High development and launch costs, combined with low early sales (5,000 units in Q1, before awareness builds), mean the business may make a loss at this stage before the product becomes profitable.**

Question 12

- **B1** identifies a relevant marketing mix decision at introduction, e.g. pricing strategy (penetration or skimming) or heavy promotion
- **B1** explains its purpose at this stage, e.g. penetration pricing sets a low price to build sales volume quickly against unknown demand
- **B1** links it to the Q1 sales figure, e.g. matching the low initial sales figure (5,000 units) that Orin Toys needs to grow
- **Answer: At introduction, Orin Toys might use penetration pricing (a low price to build sales volume quickly), matching the need to grow the low Q1 sales figure of 5,000 units.**

Question 13

- **B1** identifies that at introduction/growth, customer awareness of Orin Blocks is low
- **B1** explains that heavy promotion is needed to build that awareness and drive the sharp sales rises seen (300% then 125%, questions 4 and 5)
- **B1** identifies that by maturity, most target customers already know the product
- **B1** explains that promotional spending can be reduced (or shifted to reminder advertising) since growth has already slowed to 20% (question 6), so heavy spending would give diminishing returns
- **Answer: At introduction/growth, awareness is low, so heavy promotion drives the sharp rises seen (300% then 125%); by maturity, most target customers already know the product and growth has slowed to just 20%, so heavy spending gives diminishing returns.**

Question 14

- **B1** identifies the risk, e.g. sales will eventually decline (as shown in Q5) with nothing to replace the lost revenue
- **B1** develops the consequence, e.g. Orin Toys' overall revenue and profit would fall once Orin Blocks' decline is not offset by another product
- **Answer: Without a new product or extension strategy, sales will eventually decline (as shown in Q5) with nothing to replace the lost revenue, so Orin Toys' overall revenue and profit would fall.**

Question 15

- **Level 1** (1-3): Makes simple, undeveloped comments about the two options, with little or no use of the pack's figures and no clear recommendation.
- **Level 2** (4-6): Gives a developed argument for or against one option, using some of the pack's figures, but does not fully weigh both sides or reach a clearly justified recommendation.
- **Level 3** (7-9): Weighs the evidence for and against both options, using the sales figures and percentage changes from this pack, and reaches a justified recommendation supported by that analysis.
- **Indicative content:**
  - Launching an extension strategy is relatively low cost compared with developing a new product from scratch, and Orin Blocks still sold 27,000 units in Q5, showing meaningful ongoing demand rather than the product having died out entirely.
  - However, the fall from 54,000 to 27,000 units (a 50% drop, question 7) is very sharp, and it follows growth that had already slowed to just 20% in the previous quarter (question 6), suggesting the underlying decline may be structural, not a temporary dip an extension strategy can easily reverse.
  - Discontinuing Orin Blocks and investing in a new product avoids throwing further promotional spend at a declining line, and a genuinely new product could repeat the strong growth pattern seen at Orin Blocks' own introduction and growth stages (300% then 125% increases, questions 4 and 5).
  - Against a new product: it is riskier and slower, since question 11 showed introduction-stage sales start low (5,000 units) and new development carries high upfront cost with no guaranteed success.
  - Judgement: given that Orin Blocks has already shown two consecutive quarters of slowing then reversing growth (20% then -50%) and the decline looks structural, a low-cost extension strategy is worth trying first as a quicker, cheaper option, while Orin Toys begins developing a new product in parallel in case the extension strategy fails to reverse the trend.