



BUS.MK7 The Design Mix: Function, Aesthetics and Cost

AQA 8132 · Calculators not allowed · about 25 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions in the spaces provided. Short answers may be a phrase or sentence; extended answers should use full sentences. Riverside Bags, a fictional UK manufacturer of school backpacks, is used in several questions.

- 1** Which one of the following best describes the 'design mix' for a product such as a school backpack made by Riverside Bags?

- ☐ A) The three elements: function, aesthetics and cost
- ☐ B) The three stages of the product life cycle
- ☐ C) The four P's of the marketing mix
- ☐ D) The steps of production planning

(Total for Question 1 is 1 mark)

- 2** Riverside Bags is designing a new insulated lunch compartment inside a school backpack. Which element of the design mix is mainly concerned with whether the compartment keeps food cool?

- ☐ A) Aesthetics
- ☐ B) Function
- ☐ C) Cost
- ☐ D) Promotion

(Total for Question 2 is 1 mark)

- 3** Identify one example of an aesthetic choice Riverside Bags might make for a new school backpack.

(Total for Question 3 is 1 mark)

- 4** Identify one example of a functional design decision Riverside Bags might take for a waterproof school backpack.

(Total for Question 4 is 1 mark)

- 5** Identify one way Riverside Bags could reduce the manufacturing cost of a new backpack without changing the basic shape.

(Total for Question 5 is 1 mark)

- 6** State two elements of the design mix that Riverside Bags must consider when making a lightweight school backpack for younger children.

(Total for Question 6 is 2 marks)

- 7** Explain how a requirement for good function would affect Riverside Bags' choice of materials when designing a waterproof school backpack for rainy UK weather.

(Total for Question 7 is 1 mark)

- 8** Explain how an emphasis on aesthetics might affect the appearance and features of Riverside Bags' new school backpack aimed at teenagers.

(Total for Question 8 is 1 mark)

- 9** Explain one direct cost implication of adding a high-quality waterproof lining to Riverside Bags' backpack design.

(Total for Question 9 is 1 mark)

- 10** Riverside Bags must choose which element to prioritise for an inexpensive basic school bag sold to price-sensitive families. Which element of the design mix will they most likely prioritise?

- ☐ A) Aesthetics
- ☐ B) Function
- ☐ C) Cost
- ☐ D) Promotion

(Total for Question 10 is 1 mark)

- 11** Explain one reason why Riverside Bags should balance function and cost when designing a backpack for primary school children.

(Total for Question 11 is 1 mark)

- 12** Give one simple example of a material choice that would reduce cost for Riverside Bags when producing a basic design. Name the material choice.

(Total for Question 12 is 1 mark)

- 13** Identify one likely consequence for Riverside Bags if a new backpack has attractive aesthetics but poor function, sold at the same price as competitors.

(Total for Question 13 is 3 marks)

- 14** Riverside Bags plans a new waterproof school backpack to sell across the UK. Analyse how Riverside Bags should balance function, aesthetics and cost for this product, using applied reasoning to the case.

(Total for Question 14 is 6 marks)

Mark scheme • BUS.MK7 The Design Mix: Function, Aesthetics and Cost

Question 1

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

Question 2

- **B1** B cao
- **Answer:** B

Question 3

- **B1** an aesthetic example, e.g. bright colour patterns, textured fabric, badges, or attractive zips
- **Answer:** Any one aesthetic example, e.g. bright colour patterns on the fabric.

Question 4

- **B1** a functional example, e.g. adding sealed zips, waterproof lining, padded straps, or a laptop sleeve
- **Answer:** Any one functional example, e.g. sealed zips to keep contents dry.

Question 5

- **B1** a cost-reduction example, e.g. use a cheaper fabric, buy materials in bulk, simplify stitch patterns, or use a lower-cost supplier
- **Answer:** Any one cost reduction, e.g. using a lower-cost supplier for fabric.

Question 6

- **B1** function, e.g. lightweight materials and padded straps
- **B1** cost or aesthetics, e.g. keeping price low or using child-friendly colours
- **Answer:** Any two, e.g. function (lightweight materials) and aesthetics (child-friendly colours), or function and cost.

Question 7

- **B1** identifies effect, e.g. choose waterproof or coated fabric with sealed seams
- **Answer:** They would choose waterproof or coated fabric and sealed seams to ensure the bag keeps contents dry in rain.

Question 8

- **B1** identifies effect, e.g. stylish colours, sleek shape, branded logo or designer trims
- **Answer:** They might use stylish colourways, a sleek profile and visible branding or designer trims to appeal to teenagers.

Question 9

- **B1** identifies implication, e.g. increases material and production cost so retail price may need to rise
- **Answer:** A waterproof lining raises material and production costs, which may force the retail price to rise or reduce profit margin.

Question 10

- **B1** C cao
- **Answer:** C

Question 11

- **B1** identifies a reason, e.g. if function is poor children or parents will not buy, but if cost is too high parents may not afford it
- **Answer:** If function is poor the bag will not meet parents' needs, but if cost is too high parents may not buy, so balancing both secures sales and acceptable margins.

Question 12

- **B1** a named material choice, e.g. use polyester instead of heavy canvas
- **Answer:** Use polyester instead of heavier, more expensive canvas.

Question 13

- **B1** identifies consequence, e.g. initial sales from looks but high returns or complaints
- **B1** develops point, e.g. parents may return the bag if it leaks or straps fail
- **B1** links to outcome, e.g. reputational damage or increased after-sales costs reducing profit
- **Answer: Attractive looks may give initial sales, but poor function can cause returns and complaints, leading to reputational damage and higher after-sales costs which reduce profit.**

Question 14

- **Level 1** (1-3): Makes simple, undeveloped points about one or two elements, with limited application to Riverside Bags.
- **Level 2** (4-6): Provides a developed and applied analysis that weighs how function, aesthetics and cost should be balanced for the waterproof school backpack, referring to likely customer needs and business outcomes.
- **Indicative content:**
 - Function should be a high priority because waterproof performance and durability are core requirements for a UK school bag used in rainy weather; choices could include coated fabric, sealed seams and tested zips.
 - Cost cannot be ignored: Riverside Bags must control material and production costs so the retail price fits the target market; selecting cost-effective waterproof materials or negotiating supplier discounts can help.
 - Aesthetics remain important, especially to children and parents who want an attractive design; a balance can be found by using appealing colourways or trims that do not greatly increase production costs.
 - Applied trade-offs: investing more in function (better lining) may raise unit cost, so Riverside Bags could offset this by simplifying non-essential aesthetic features, or by offering two versions: basic waterproof model and premium design with extra styling.
 - Consider customer segments: price-sensitive parents need reliable waterproofing at a low price, so emphasize function and cost; a smaller premium segment will pay for added aesthetics and branding.
 - Conclusion might recommend prioritising function first, controlling cost second, and using selective aesthetic choices to differentiate the product while keeping unit cost acceptable.