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Design & Technology
AQA A-Level

Testing and evaluating products in commercial products

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

Advice

- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don’t spend too much time on one question

Good luck!

Q1. Why are commercial products tested before being released for sale?

A To reduce manufacturing time

B To ensure they meet safety and performance standards

C To speed up advertising campaigns

Q2. Which of the following is a typical method used in commercial product testing?

A Ignoring user feedback

B Using only visual inspections

C Simulating real-world conditions such as heat or pressure

Q3. What is one main benefit of rigorous testing during product development?

A Products become cheaper to manufacture

B Defects are discovered after the product reaches the market

C Problems can be identified and corrected before mass production

Q4. Why might a commercial product undergo user trials?

A To test packaging design only

B To gather real-world feedback on performance and usability

C To increase the number of production errors

Q5. Discuss why rigorous testing is important in the development of commercial products **(6 marks)**

Answers

Q1. B
Q2. C
Q3. C
Q4. B

Q5.
Award up to 6 marks for a well-developed explanation that may include the following points:

- Ensures products meet safety and legal standards before being sold
- Identifies faults or weaknesses early, reducing risk of product failure
- Helps maintain brand reputation and customer trust
- Allows manufacturers to make informed design modifications before mass production
- Examples of testing methods may include:
    - Mechanical testing (e.g. stress, impact, fatigue tests)
    - Environmental testing (e.g. heat, humidity, UV exposure)
    - User trials to gather real-world feedback
    - Safety testing for hazards (e.g. electrical, flammability)
- Inadequate testing can lead to:
    - Product recalls, legal action, or harm to users
    - Increased costs due to rework, waste, or customer refunds