

Design & Technology (Product Design)

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OCR A-Level

Research and Data Interpretation in Design Development (3.5b)

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. A designer conducts observational primary research in a school to study how students use stationery products. Which factor most significantly threatens the *validity* of the findings?

- A** Students behaving differently because they know they're being observed
- B** The designer taking written notes instead of video recordings
- C** The designer analysing the recordings a week later

Q2. Which example best demonstrates primary research contributing directly to design development?

- A** Reading an online review of a similar product
- B** Conducting user testing to observe how people interact with a prototype
- C** Downloading CAD files from a manufacturer's website

Q3. Which research source presents the *highest risk* of bias affecting design decisions?

- A** Independent standards organisations
- B** Verified academic publications
- C** Sponsored articles on commercial websites

Q4. Why are specialist engineering databases often superior to general websites for design research?

- A** They provide anecdotal evidence that helps spark creativity
- B** They always list the cheapest component options
- C** They include validated, standardised measurements with defined testing conditions

Q5. The designer of the walkie-talkie would have undertaken primary and secondary research as part of the iterative design process.

Discuss the importance of designers interpreting their own market research data and information from specialist websites and publications to inform their design decisions.

Refer to specific examples in your response. **(8 marks)**

Answers

Q1. A

Q2. B

Q3. C

Q4. C

Q5.

Indicative content:

- Qualitative observations could be through interviews to gain an understanding of potential user. This primary research gives the designer the ability to work through or identify any misunderstandings, once a prototype of a product has been made.
- Quantitative observations from anthropometrics need to be interpreted throughout the development of the design to ensure that the product fits the intended user. Designers should be able to understand the percentiles of measurements for a specific group of people to ensure the design is inclusive.
- Market research, informing design decisions by identifying trends demographics & buying habits at the beginning of the design process. This information could be through companies providing secondary research such as MINTEL who provides indepth market analysis and consumer opinions that the designer can access for a fee. The advantage of this is that a wider audience has been reached, so the information is likely to be more accurate for commercial production. However, this may not be specific to the product being designed.
- Focus groups are an important way of gathering market research as part of a feasibility study. The designer will need to be able to objectively listen and gather opinions from others about their idea or product. This could include usability studies. This information could then be used to improve the design and test viability.
- Any other valid suggestion.