

## **Design & Technology AQA GCSE**

# **Use primary and secondary data to understand client and/or user needs**

### **Materials required for questions**

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- Pencil
- Rubber
- Calculator

### **Instructions**

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- 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**

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- 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.** What is the main benefit of using anthropometric data in product design?

- A** To ensure the product fits the widest range of users possible
- B** To reduce manufacturing costs by standardizing sizes
- C** To make products visually appealing to consumers

**Q2.** Why are focus groups valuable in product development?

- A** They provide quantitative data for statistical analysis
- B** They reveal user emotions and unexpected insights
- C** They eliminate the need for individual interviews

**Q3.** How do designers typically apply the 5th-95th percentile range?

- A** To exclude extreme user measurements from consideration
- B** To accommodate most users while allowing for adjustability
- C** To target only average-sized individuals

**Q4.** Which technique best identifies hidden usability issues?

- A** Observational user testing in real-world conditions
- B** Online surveys with multiple-choice questions
- C** Theoretical ergonomic modelling

**Q5.** Focus groups and market research are used by designers to gather information before designing products. Use one example for each technique and describe how they would be used to help design products **(2 x 3 marks)**

Focus groups

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Market research

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**Q6.** Describe the following two types of investigation. Give examples to show how they help when designing **(2 x 3 marks)**

Primary research

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Secondary research

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## **Answers**

**Q1.** A

**Q2.** B

**Q3.** B

**Q4.** A

**Q5.**

### **Focus groups**

- A primary source of information gathering, eg unlike written articles or online resources completed by another.
- Very specific way of finding useful research talking to people of interested parties to prepare/help with designing, eg about a prototype product.
- A gathered group of people where opinions and perceptions are observed/discussed/shared, eg features of a recently released product like a child's toy.
- Focus groups allow for people to interact and share views and opinions unlike say interviews/survey/poll usually completed by/with an individual.
- Allow a designer or manufacturer to talk/engage directly with consumers/customers.

### **Market research**

- A consideration of what's already on the market (product analysis), eg a competitor may want to evaluate the good and bad points (customer perceptions) of a mobile phone or 100% electric car against hybrid.
- A critical evaluation of what's already on the market and what they would be in competition with.
- Identification of a gap in the market for a particular product.
- A manufacturer will want to know if the development of a product is viable, eg like Land Rover with the first SUV in the 1970s or more recently Nespresso with their coffee pod machines.
- May involve interviews or surveys

**Q6.**

Definition of primary research:	<ul style="list-style-type: none"><li>• Involves the collection of research first-hand</li><li>• Information you have collected yourself</li><li>• Completed by the author of the research</li><li>• All forms of field research</li></ul>
Examples of primary research:	<ul style="list-style-type: none"><li>• Interviews – telephone, social media and face to face</li><li>• Questionnaires</li><li>• Material testing</li><li>• Product analysis</li><li>• Measuring – useful sizes</li><li>• Surveys</li><li>• Focus groups</li></ul>
Definition of secondary research:	<ul style="list-style-type: none"><li>• Involves the use of data and research collected by another person or 3rd party</li><li>• Data and information presented by another person</li><li>• Use of material someone else has initially collated and put together</li><li>• Also known as desk research</li></ul>
Examples of secondary research:	<ul style="list-style-type: none"><li>• Use of books, magazines, periodicals</li><li>• Looking at the work of other designers and companies</li><li>• Published anthropometric and ergonomic data</li><li>• Materials/component catalogues</li><li>• TV programmes and social media outlets</li><li>• Consumer sources eg watchdog</li></ul>