

# Design & Technology

## Strategies, techniques and approaches to explore, create and evaluate design ideas

### 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 are two sources of anthropometric data

- A** BSI, DTI
- B** WHO, ASE
- C** DTI, BSL

**Q2.** Which of the following is a source of secondary data

- A** Focus group
- B** Survey
- C** Research paper

**Q3.** A method of raising brand awareness by using social media and website adverts is called what

- A** Innovation
- B** Virtual retailing
- C** Virtual marketing

**Q4.** When designers, engineers, sales and legal teams all work together this is called

- A** User centred design
- B** Cooperation
- C** Systems thinking

**Q5.** Outline how and why a company would use social media to market their product. **(6 marks)**

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**Q6.** Use **one** example for **each** technique listed below and describe how they would be used to help design products **(6 marks)**

Focus groups

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Market research

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**Q7.** Describe the following **two** types of investigation and give examples to show how they help when designing **(6 marks)**

Primary Research

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Secondary Research

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## Answers

Q1. A

Q2. C

Q3. C

Q4. B

Q5.

- Social media can allow a company a worldwide platform on which to market their product. This in turn can lead to increased sales, exports and the appointment of regional or national distributors.
- Social media is more cost effective than the traditional costs associated with advertising or distribution of marketing material. Costs are passed on to the consumer through internet subscription or data plans.
- Advertising campaigns can be pushed out daily due to the digital nature of the advert and the relative ease in which a graphical communication can be produced.
- Potential customers can be alerted to a brand via linking techniques such as 'hashtags' providing the company with increased coverage and associating them with similar companies.
- User reviews or recommendations can be instantly shared online through ancillary platforms such as 'Trustpilot'. This allows a company to share 'real life' consumer reviews, user videos and endorsement of their product.
- Companies could use product placements in online videos or have their product endorsed by social media influencers, popular channels or celebrity accounts.
- Companies can use data 'cookies' to target individual marketing campaigns based on location or historically browsing patterns.

## Q6.

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.

## **Q7.**

### **Primary Research:**

- Involves the collection of research first-hand
- Information you have collected yourself
- Completed by the author of the research
- All forms of field research

### **Examples:**

- Interviews – telephone, social media and face to face
- Questionnaires
- Material testing
- Product analysis
- Measuring – useful sizes
- Surveys
- Focus groups

### **Secondary Research:**

- Involves the use of data and research collected by another person or 3rd party
- Data and information presented by another person
- Use of material someone else has initially collated and put together
- Also known as desk research

### **Examples:**

- Use of books, magazines, periodicals
- Looking at the work of other designers and companies
- Published anthropometric and ergonomic data
- Materials/component catalogues
- TV programmes and social media outlets
- Consumer sources eg watchdog