

Write your name here

Surname

Other names

Pearson
Edexcel GCE

Centre Number

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Candidate Number

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Design and Technology

Product Design: Graphic Products

Advanced

Unit 3: Designing for the future

Monday 8 June 2015 – Morning

Time: 2 hours

Paper Reference

6GR03/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches it must be dark (HB or B). Coloured pens, pencils and highlighter pens must not be used.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 70.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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PEARSON

Answer ALL questions. Write your answers in the spaces provided.

1 Modern marketing and manufacturing techniques affect many aspects of our consumer society.

(a) Describe how companies target children as new consumers.

(2)

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(b) Discuss the effect of mass production on employment.

(4)

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(Total for Question 1 = 6 marks)



2 Anthropometric data is used in the design of consumer products.

(a) State a source of anthropometric data used when designing for the UK market.

(1)

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(b) When using anthropometric data designers do not consider the full population.

Outline how anthropometric data is used to cover a large proportion of the population.

(3)

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(c) Explain **two** ergonomic features that should be considered when designing the driver's seat of a car.

(4)

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(Total for Question 2 = 8 marks)

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3 Blue screen and green screen technologies are widely used in digital special effects during film and television production.

(a) Outline the benefits of using these technologies.

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(b) Explain why green screen is now more widely used than blue screen in special effects.

(2)

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(Total for Question 3 = 6 marks)



4 Electronic communications are now common throughout the business world.

(a) Discuss the use of email as a means of communication between designers and manufacturers.

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(b) Evaluate the use of video conferencing for meetings between designers and manufacturers.

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(Total for Question 4 = 8 marks)



5 Modern manufacturing makes extensive use of computer integrated manufacture (CIM).

(a) Outline the use of automated storage and retrieval systems (ASRS) within CIM.

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(b) Justify the use of CNC (computer numerically controlled) machinery to produce a prototype interactive display stand.

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***7** The debate regarding 'form versus function' has long been a discussion topic between designers.

(a) Explain the disadvantages of 'form following function' when designing a point of sale display.

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(b) Figure 1 and Figure 2 below show two different coffee tables.



Figure 1



Figure 2

Evaluate how the designers of the two examples in Figure 1 and Figure 2 have considered form and function as part of their design ideas.

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(Total for Question 7 = 10 marks)



***8** (a) Evaluate the use of energy recovery from incineration following the disposal of waste.

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(b) Evaluate the impact of sustainable forest management.

(6)

Dotted lines for writing the answer.

(Total for Question 8 = 10 marks)

TOTAL FOR PAPER = 70 MARKS





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