

Please check the examination details below before entering your candidate information			
Candidate surname		Other names	
Pearson Edexcel GCE		Centre Number	Candidate Number
Friday 7th June 2019			
Morning (Time: 2 hours)		Paper Reference 6GR03/01	
Design and Technology Product Design: Graphic Products Advanced Unit 3: Designing for the Future			
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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Answer ALL questions. Write your answers in the spaces provided.

- 1** Designers need to consider ergonomics and anthropometrics when designing products for the UK market.

(a) Name **two** sources of appropriate anthropometric data.

(2)

1

2

(b) Give **four** reasons why designers only consider 90% of the population when developing designs for consumer products.

(4)

1

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2

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3

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4

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(c) Discuss the benefits of good ergonomic design from the consumers' point of view. (4)

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(Total for Question 1 = 10 marks)



2 Philippe Starck is a designer from the New Design style.

Figure 1 shows the 'Hot Bertaa' kettle that was designed by Philippe Starck.



(Source: © Chris Willson/Alamy)

Figure 1

Discuss how Philippe Starck has approached the design of the kettle.

(6)

(Total for Question 2 = 6 marks)



3 Sustainability is an important consideration when designing packaging.

(a) Outline how packaging can be designed to maximise opportunities for recycling.

(4)

(b) Explain **two** disadvantages of reusable packaging.

(4)

1

2



(c) Discuss the benefits to the manufacturer of reusable packaging.

(6)

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(Total for Question 3 = 14 marks)



4 Consumer goods are rapidly changing as a result of technological developments.

(a) Explain **two** ways that built-in obsolescence impacts on consumers of electronic products.

(4)

1

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2

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(b) Electronic products have continually reduced in size.

Discuss the technological developments that have enabled this to happen.

(6)

(Total for Question 4 = 10 marks)



5 The development of consumer products and architecture has been influenced by various design movements over the years.

(a) Outline the main characteristics of **one** of the following design movements:

- Art Deco
- Art Nouveau.

Chosen design movement:

(4)



(b) Figure 2 shows a building designed in the Bauhaus style.



(Source: © Claudio Divizia/Shutterstock)

Figure 2

Discuss how the Bauhaus movement has influenced architectural style.

(6)

(Total for Question 5 = 10 marks)



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- *6 Evaluate the production of genetically modified wood for paper and board used in graphic products.

(8)

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(Total for Question 6 = 8 marks)



7 Meeting future energy needs is a concern for governments around the world.

(a) Photovoltaic cells are expensive to buy and install.

Explain **two** other disadvantages of photovoltaic cells.

(4)

1

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*(b) Evaluate the use of hydroelectric power as an alternative to fossil fuelled power stations.

(8)

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(Total for Question 7 = 12 marks)

TOTAL FOR PAPER = 70 MARKS



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