

Please check the examination details below before entering your candidate information

Candidate surname					Other names									
Pearson Edexcel GCE					Centre Number 					Candidate Number 				
Friday 7 June 2019														
Morning (Time: 2 hours)					Paper Reference 6RM03/01									
Design and Technology Product Design: Resistant Materials Technology Advanced Unit 3: Designing for the Future														
You do not need any other materials.								Total Marks						

Instructions

- Use **black** ink or ball-point pen.
- **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 the questions. Write your answers in the spaces provided.

- 1 (a) Figure 1 shows a rocking chair with curved laminated components.

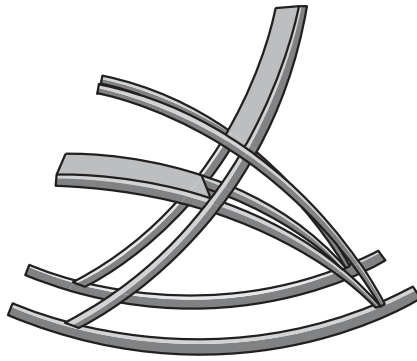


Figure 1

Describe, using notes and/or sketches, how the curved laminated components would be manufactured.

(4)



(b) Products are often designed with built-in obsolescence.

(i) Explain **two** advantages for the manufacturer of built-in obsolescence.

(4)

1

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(ii) Explain **two** advantages for the consumer of built-in obsolescence.

(4)

1

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(Total for Question 1 = 12 marks)



2 Automation has had a number of effects on production.

(a) Explain **three** benefits for the manufacturer of using robots for production.

(6)

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(b) Describe the impact that the increasing use of computer-integrated manufacturing (CIM) is having on employment.

(6)

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(Total for Question 2 = 12 marks)



- 3 (a) Companies may consider using environmentally friendly materials when designing products.

Give **four** environmentally friendly characteristics of Biopol®.

(4)

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3

4



(b) Using refillable containers is one strategy to minimise environmental impact.
Evaluate the issues associated with using refillable containers.

(8)

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(Total for Question 3 = 12 marks)



4 Electronic communications are central to daily business life.

- (a) Outline the advantages for a business of using email over telephone communication systems.

(6)



(b) Outline how the use of electronic point of sale (EPOS) systems can increase the efficiency of a company.

(6)

(Total for Question 4 = 12 marks)



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***5** Deforestation is a key environmental concern in timber production.

Outline the harmful effects of deforestation.

(10)

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(Total for Question 5 = 10 marks)



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- *6 Many companies use quick response manufacturing (QRM) as a strategy to become more competitive.

Evaluate the use of QRM.

(12)

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(Total for Question 6 = 12 marks)

TOTAL FOR PAPER = 70 MARKS



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