

Write your name here	
Surname	Other names
Centre Number	Candidate Number
<input type="text"/>	<input type="text"/>
<b>Edexcel GCE</b>	
<b>Design and Technology</b>	
<b>Product Design: Graphic Products</b>	
<b>Advanced</b>	
<b>Unit 3: Designing for the Future</b>	
Thursday 23 June 2011 – Afternoon <b>Time: 2 hours</b>	Paper Reference <b>6GR03/01</b>
<b>You do not need any other materials.</b>	Total Marks
<input type="text"/>	<input type="text"/>

### 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.
- Keep an eye on the time.
- 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** Carrier bags are a major concern to wildlife and the environment. The table indicates three types of carrier bag in common use.

Complete the table by identifying **one** environmental advantage and **one** environmental disadvantage for each carrier bag.

Type of Carrier bag	Advantage	Disadvantage
Paper carrier bag	(1)	(1)
Plastic carrier bag	(1)	(1)
Eco friendly plastic carrier bag	(1)	(1)

**(Total for Question 1 = 6 marks)**



2 (a) Discuss the **advantages** of biotechnology in the production of paper and board.

(4)

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(b) An important feature of timber production is sustainable forest management.

Outline the environmental impact that is caused by deforestation.

(6)

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**(Total for Question 2 = 10 marks)**





(c) Outline the role of the Non-Fossil Fuel Obligations (NFFO) in United Kingdom energy planning.

(2)

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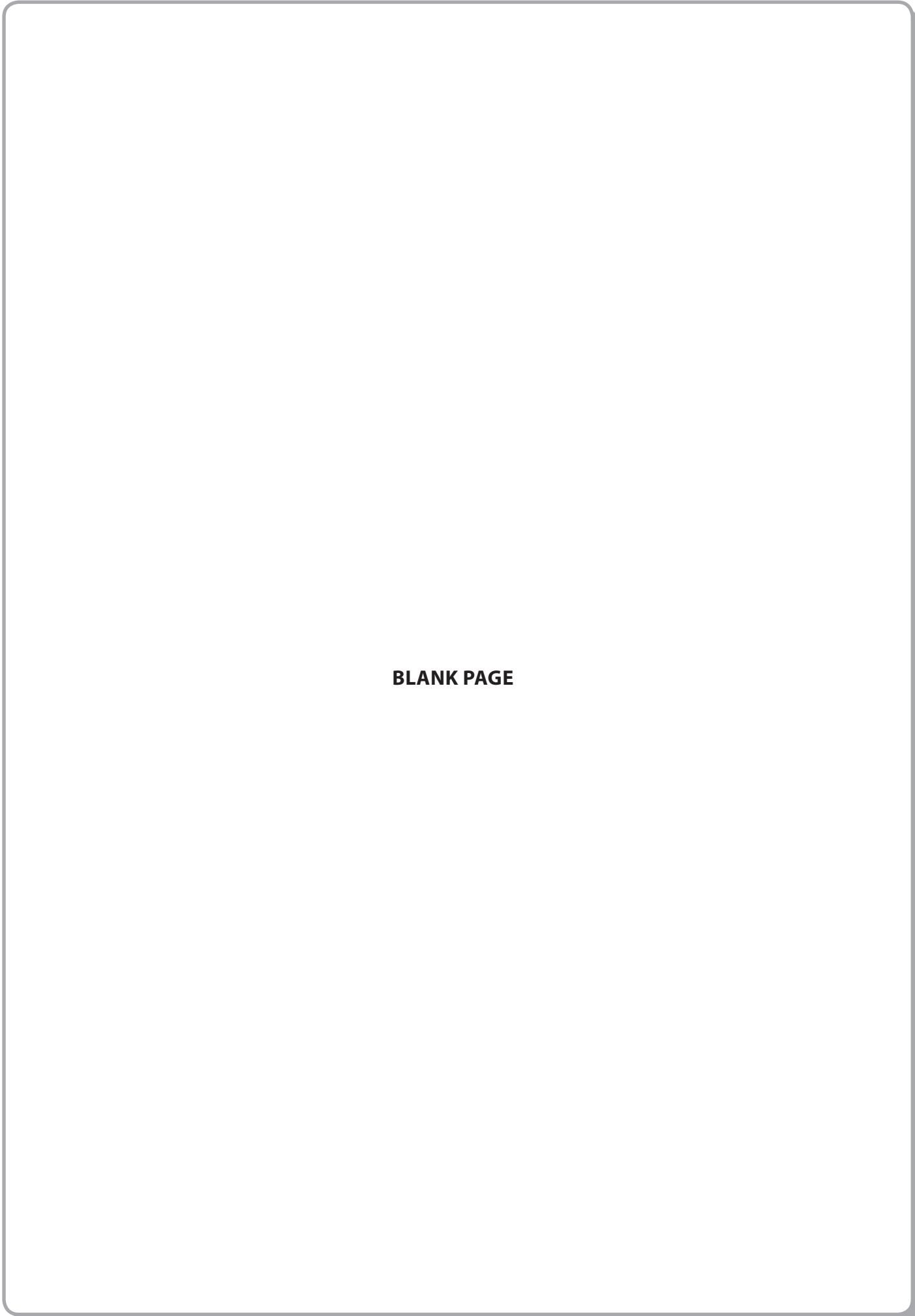
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**(Total for Question 3 = 12 marks)**







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5 The introduction of information and communication technology (ICT) has had considerable benefits for industrial and commercial practices.

(a) Discuss the **advantages** of using Electronic Data Interchange (EDI) for transmitting data between companies.

(3)

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6 The development of products has been influenced by a range of design movements.

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

- Art Deco
- Art Nouveau

(4)

Chosen design movement .....

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(b) Discuss the ways in which the work of Raymond Loewy has contributed to modern industrial design.

(5)

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(Total for Question 6 = 9 marks)





