

Write your name here	
Surname	Other names
Centre Number	Candidate Number
<input type="text"/>	<input type="text"/>
Edexcel GCE	
Design and Technology	
Product Design: Graphic Products	
Advanced Subsidiary	
Unit 2: Design and Technology in Practice	
Tuesday 19 May 2009 – Morning	Paper Reference
Time: 1 hour 30 minutes	6GR02/01
You do not need any other materials.	Total Marks
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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.*
- You will be assessed on your ability to organise and present information, ideas, descriptions and arguments clearly and logically, including your use of grammar, punctuation and spelling.

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.

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Turn over ►

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

- 1 Figure 1 shows a range of greeting cards. A designer uses desktop publishing (DTP) when producing ideas for the cards.



Figure 1

- (a) Give **four** advantages of using DTP over hand produced layouts.

(4)

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(b) Describe **two** Health and Safety issues that must be considered when working on a computer.

(4)

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(c) Describe how piezoelectric crystals could be used to enhance a greeting card.

(2)

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(d) Describe how phosphorescent pigments could be used to further enhance a greeting card.

(2)

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(Total for Question 1 = 12 marks)



2 Once a greeting card design is completed it will be commercially printed.

(a) Quality control (QC) will be needed to ensure a high quality colour printed image.

(i) Describe how computers are used to ensure colour consistency in the final print run.

(3)

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(ii) State and describe **two** further methods of quality control used in high volume printing.

(6)

Method 1

Description

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Method 2

Description

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(b) The gravure printing process is to be used for the commercial printing of a greeting card.

(i) Explain **two** benefits of using this printing process.

(4)

1

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2

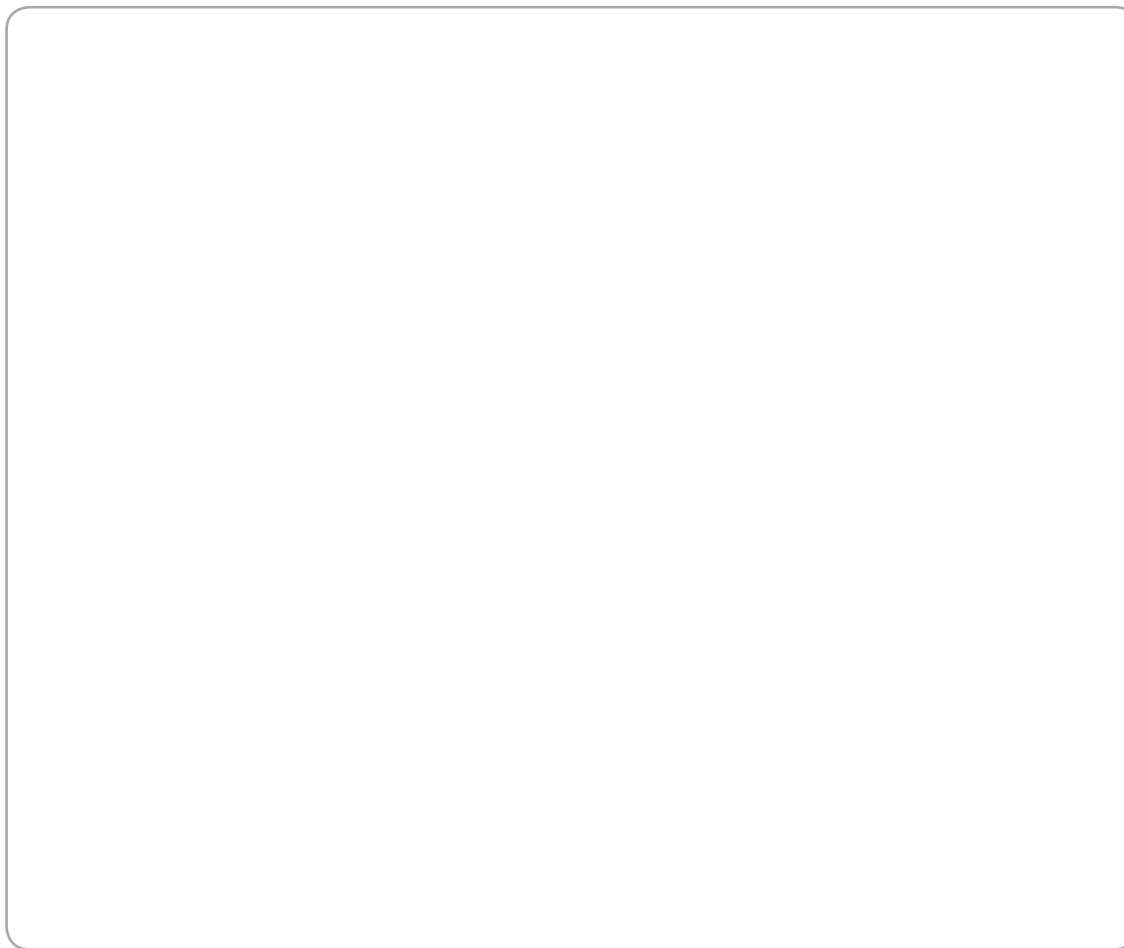
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(ii) Using annotated sketches, describe the gravure printing process.

(4)



(Total for Question 2 = 17 marks)





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6



3 An architect has designed a house. To show the idea to his client, a hand made block model has been produced.

(a) Outline **four** properties of Styrofoam™ which make it a suitable material for producing the block model.

(4)

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(b) To show the internal details of the house, a virtual model has been generated on a computer.

Discuss the benefits of this method of modelling.

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(c) Figure 2 shows two orthographic views of a house.

From the orthographic views, produce a pictorial illustration of the house looking in the direction of the arrow shown.

Draw your response in the box on the facing page.

(6)

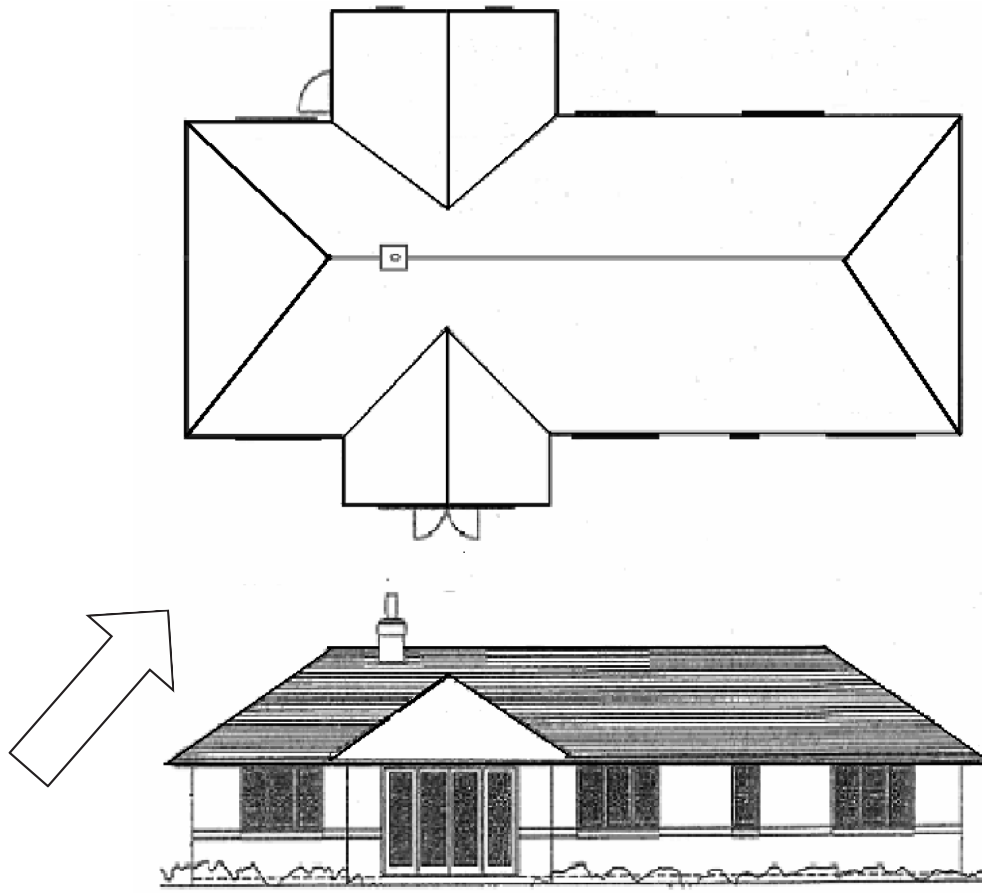


Figure 2



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[Large empty rectangular box for writing]

(Total for Question 3 = 15 marks)



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4 Figure 3 shows a blister pack.

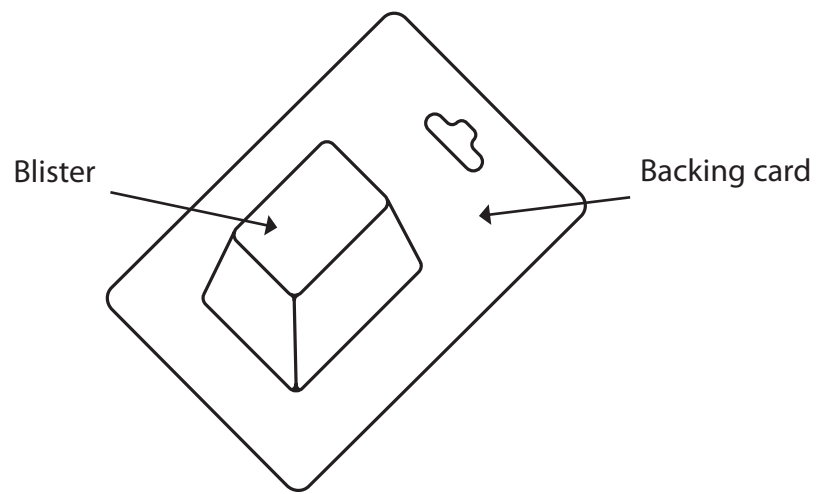


Figure 3

(a) (i) State a suitable polymer for the vacuum formed blister.

(1)

(ii) Using annotated sketches, describe the stages in vacuum forming the polymer blister.

(5)




A large, empty rectangular box with rounded corners, intended for the student to draw annotated sketches of the vacuum forming process.



(b) The table below shows three symbols that are often displayed on the backing card.

Complete the table by stating the meaning of each symbol.

(3)

Symbol	Meaning
	
	
	

(c) Carton board is to be used for the backing card.

Outline the benefits of using carton board for this purpose.

(5)

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(Total for Question 4 = 14 marks)



5 Figure 4 shows a hot drinks cup made from expanded polystyrene (PS).



Figure 4

(a) Describe **three** properties of expanded polystyrene (PS) that make it suitable to be used for a hot drinks cup.

(6)

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Figure 5 shows an aluminium pavement sign.

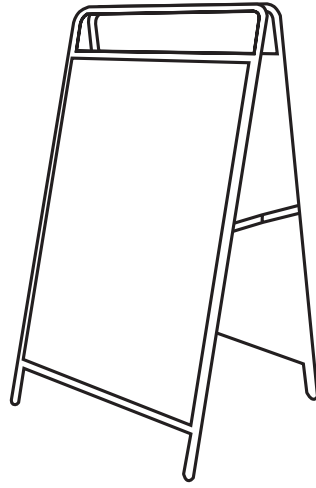


Figure 5

(b) Evaluate the use of aluminium in the construction of this pavement sign in preference to other materials.

(6)

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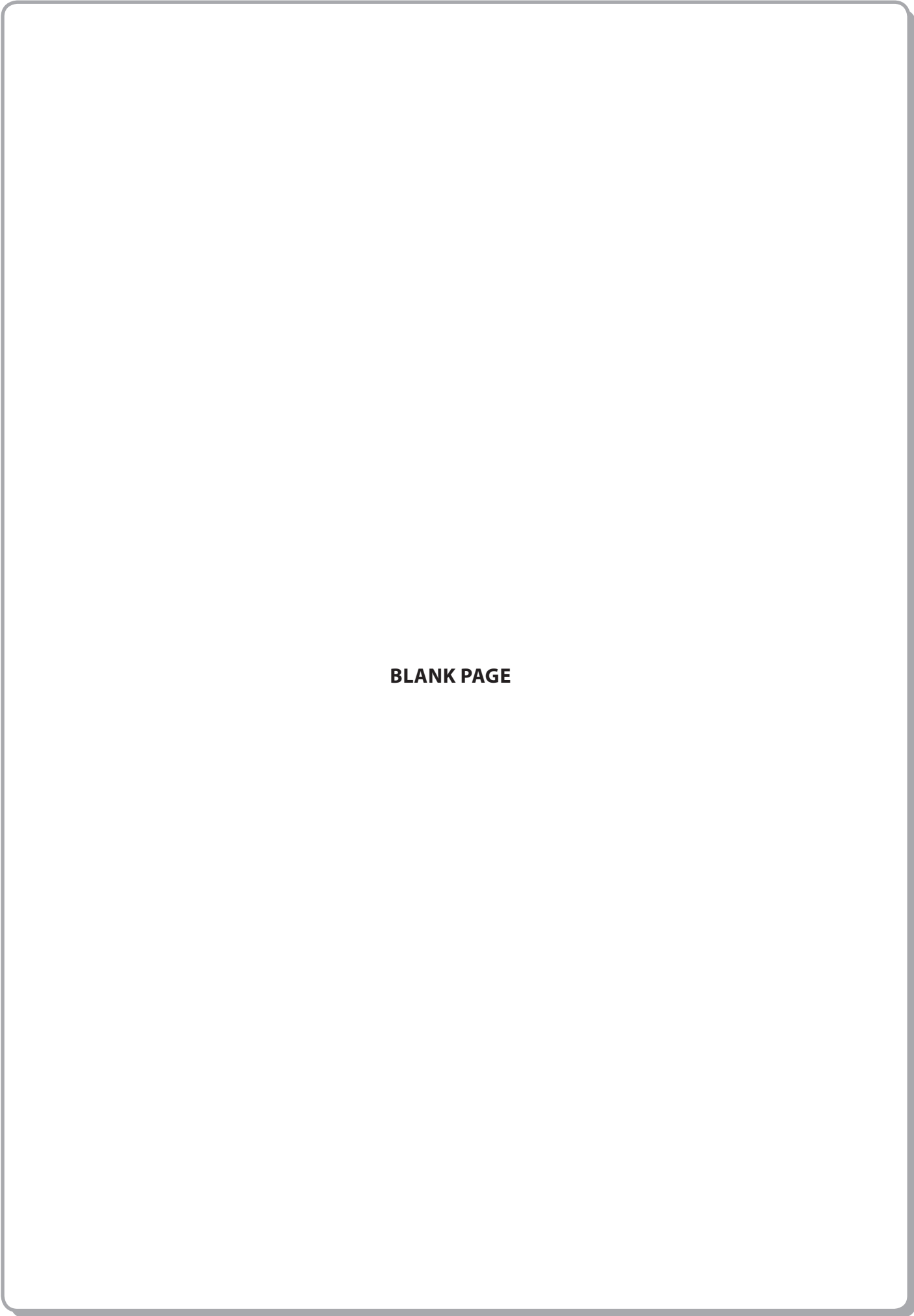
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(Total for Question 5 = 12 marks)

TOTAL FOR PAPER = 70 MARKS





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