

Surname					Other Names				
Centre Number					Candidate Number				
Candidate Signature									

For Examiner's Use
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General Certificate of Secondary Education  
June 2007

**DESIGN AND TECHNOLOGY  
(FOOD TECHNOLOGY) (SHORT COURSE)  
Written Paper  
Higher Tier**

**3552/H  
H**



Friday 22 June 2007 1.30 pm to 3.00 pm

<p><b>For this paper you must have:</b></p> <ul style="list-style-type: none"> <li>a pen, a pencil, a ruler, an eraser, a pencil sharpener and coloured pencils.</li> </ul>
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For Examiner's Use			
Question	Mark	Question	Mark
1		5	
2		6	
3		7	
4		8	
Total (Column 1) →			
Total (Column 2) →			
<b>TOTAL</b>			
Examiner's Initials			

Time allowed: 1 hour 30 minutes

**Instructions**

- Use blue or black ink or ball-point pen. Use pencil and coloured pencils only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- Answer the questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information**

- The maximum mark for this paper is 100.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.

Answer **all** questions in the spaces provided.

**1** Question 1 is about a range of bread products.

Sales of bread products have changed over recent years.

The table below shows sales information for different breads.

	<b>1960</b>	<b>1980</b>	<b>2000</b>
White bread	75%	50%	41%
Bagel	2%	6%	7%
Ciabatta	8%	20%	22%
Croissant	3%	9%	11%
Naan	9%	11%	14%
Others	3%	4%	5%

- (a) Name one research method that manufacturers use to gather this type of information.

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(1 mark)

- (b) Describe how this research method is carried out.

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(3 marks)

(c) Explain why white bread has become less popular.

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*(2 marks)*

(d) Explain why Ciabatta bread has become more popular.

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*(2 marks)*

**Turn over for the next question**

8
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**Turn over ►**

**2** Question 2 is about choice of flour.

Many manufacturers are keen to choose ingredients that will make their products healthy options.

The table below compares different types of flours used in bread products.

Type of flour	Per 100 g			
	kcal	Fat	Fibre	Iron
Wholemeal	310 kcal	2.2 g	8.6 g	3.9 mg
Strong White	341 kcal	1.4 g	3.7 g	2.1 mg
Granary	323 kcal	1.8 g	7.0 g	3.2 mg

- (a) (i) Using information from the table, name the type of flour which is most suitable for a healthy option bread product.

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(1 mark)

- (ii) Give reasons for your choice.

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 (4 marks)

(b) (i) Name the type of flour from the table that is most suitable for making a *well risen* loaf of bread.

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(1 mark)

(ii) Give reasons for your choice.

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(2 marks)

**Turn over for the next question**

**8**

**Turn over ►**

3 Question 3 is about designing new food products.

A takeaway food outlet is developing new ideas for *Wrap and Roll* bread products.

A successful product will

- contain a savoury, healthy option filling
- be suitable to eat without cutlery
- appeal to vegetarian consumers
- offer sensory appeal.

(a) Use notes and sketches to show **two** different design ideas for a Wrap or Roll product.

Do **not** draw any packaging.

**Design Idea 1**      **Product name** .....

*(5 marks)*

**Design Idea 2**      **Product name** .....

*(5 marks)*

(b) Which of your design ideas will you choose to develop?

Design Idea 1

Design Idea 2

Explain how this design idea will be suitable for vegetarians.

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*(4 marks)*

(c) Complete the table to show the main ingredients used to make the chosen design idea.

Give a **different** reason why each ingredient is used.

Ingredients	Reasons for use

*(10 marks)*

**Turn over ►**

(d) Produce a plan for making your chosen design idea in a test kitchen.

You may use flow charts, diagrams, notes or sketches in your answer.

(10 marks)

34



4 Question 4 is about control checks used during production.

(a) Describe a different control check used during each stage of making bread rolls.

Preparation stage	Control check used
Shaping the dough	..... ..... .....
Cooking the bread rolls	..... ..... .....

(2 marks)

(b) What is meant by the term *critical control check*?

Give an example.

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(3 marks)

**Question 4 continues on the next page**

**Turn over ►**

(c) Results of control checks show the following problems.

Problem	Causes	How to prevent this problem
Bread rolls do not rise when cooked.	..... ..... ..... .....	..... ..... ..... .....
A wrap falls to pieces when filled.	..... ..... ..... .....	..... ..... ..... .....
An insect is found in a salad sandwich.	..... ..... ..... .....	..... ..... ..... .....

Complete the table above to show

(i) the causes of each problem, (3 marks)

(ii) how each problem may be prevented. (3 marks)

5 Question 5 is about the use of standard components.

(a) (i) What is meant by the term *standard component*?

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(2 marks)

(ii) What are the advantages and disadvantages of using standard components?




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(6 marks)

**Question 5 continues on the next page**

**Turn over ►**

(b) A test kitchen compares samples of the following sandwich fillings.

Product A	Product B	Product C
<p>A tub of tuna and sweetcorn filling</p> 	<p>A jar of tuna and sweetcorn filling</p> 	<p>A can of tuna and sweetcorn filling</p> 

Name **and** describe **one** method of sensory testing used to find out consumer preferences for these different types of sandwich fillings.

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(6 marks)

(c) Give **two** advantages of **each** of the packaging materials used for the tuna and sweetcorn filling.

Packaging material	Advantages
Plastic tub	1 ..... ..... 2 ..... .....
Glass jar	1 ..... ..... 2 ..... .....
Metal can	1 ..... ..... 2 ..... .....

(6 marks)

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**Turn over for the next question**

**Turn over ►**

6 Question 6 is about high risk foods.



Seafood sandwich fillings are popular with many consumers.

(a) Why is seafood a high risk food?

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(2 marks)

(b) At what temperature should high risk foods be stored in a refrigerator?

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(1 mark)

(c) How do retailers ensure that chilled foods do not fall **below** the correct temperature?

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(4 marks)

7

7 Question 7 is about the packaging and labelling of products.

The following information is often seen on packaged sandwich products.

‘This product may contain wheat, gluten, eggs, milk.’

Explain how this information may help reduce any risks to the consumer.

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(4 marks)

4

**Turn over for the next question**

**Turn over ►**

