

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Secondary Education  
Specimen Paper

# Design and Technology: **XXXX/W** Food Technology

**Unit 1: Written Paper**

Date: Time

**For this paper you must have:**

- a pen, a pencil, a ruler, an eraser, a pencil sharpener and coloured pencils.

Time allowed: 2 hours

**Instructions**

- Use black ink or black 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 question in the spaces provided.

**Information**

- The maximum mark for this paper is 120.
- The marks for questions are shown in brackets.
- The question in Section A relates to the context referred to in the preparation sheet that was previously issued.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication will be assessed in question 6 (b).

**Advice**

- You are advised to answer the questions in the order in which they are written.

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
<b>TOTAL</b>	

**XXXX/W**

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## SECTION A

You should answer this question.

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Section A is about designing new products

You are advised to spend about 30 minutes on this question.

### DESIGN BRIEF:

CONTEXT: Savoury wrap and roll bread products served in take away outlets.

PRODUCT TO BE DEVELOPED: *Wrap or Roll* bread product

DESIGN CRITERIA:

A successful product will

- contain a savoury filling
- be suitable to eat without cutlery
- offer sensory appeal.

1 (a) On the opposite page:

1 (a) (i) sketch **two** different design ideas for a suitable Wrap or Roll bread product,

1 (a) (ii) annotate your sketches to show how your design ideas meet each of the given design criteria.

Do **not** draw any packaging.



Design idea 1

Product name:

*(6 marks)*

Design idea 2

Product name:

*(6 marks)*

**Turn over ►**

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



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Design idea 1

Design idea 2

**1 (b) (i)** Using flowcharts, notes and /or diagrams produce a plan for making your chosen design idea in the test kitchen.

*(8 marks)*



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1 (b) (ii) Explain why control points are important.

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(2 marks)

1 (c) The packaging of food products always shows the ingredients used and often also shows a nutritional profile.

A example showing one ingredient used in a bread product is given for you.

Ingredients used in a bread roll	Nutritional profile
Wheat flour	Carbohydrate for energy

1 (c) (i) Complete the table below to show **two** other main ingredients used to add nutritional value to the chosen design idea. Give a different reason why each ingredient is used.

Ingredients	Nutritional profile
<p><b>Ingredient 1</b></p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p><b>Ingredient 2</b></p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

(4 marks)

**Turn over ►**



1 (c) (ii) Analyse your design idea and suggest ways in which it can be adapted to meet the needs of consumers who need to follow a special diet due to food intolerances or allergies.

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*(4 marks)*

30
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**SECTION B**

You should answer **all** questions in this section.

You are advised to spend about 22 minutes on this question.

Sales of cheese products have changed over recent years.

The table below shows percentages of sales for different cheese products.

	<b>1960s</b>	<b>1980s</b>	<b>2000</b>
<b>Cheddar</b>	75%	50%	41%
<b>Cottage cheese</b>	2%	7%	8%
<b>Edam</b>	8%	20%	24%
<b>Mozzarella</b>	5%	11%	15%
<b>Cream cheese</b>	10%	12%	12%

- 2 (a) (i) Using the information shown in the table, name **two** cheese products that have become more popular since the 1980s.

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(2 marks)

**Turn over ►**



2 (a) (ii) Give **two** detailed reasons why these have become more popular.

**Reason 1**.....

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**Reason 2**.....

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*(4 marks)*

2 (a) (iii) Consumers are now more aware of the need for healthy eating.

Evaluate how this has affected the sales of some types of cheese, using the information in the table to help you.

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*(3 marks)*




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2 (b) A test kitchen carries out sensory testing on the following cheese samples.

**Cheese slices      Grated cheese      Cheese spread**

2 (b) (i) Using notes and/or sketches describe **one** method of sensory testing that may be carried out on these samples.



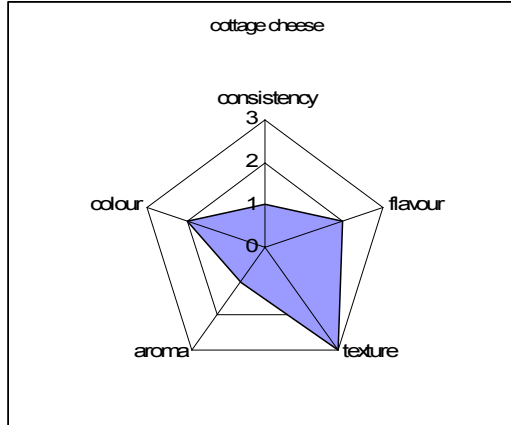
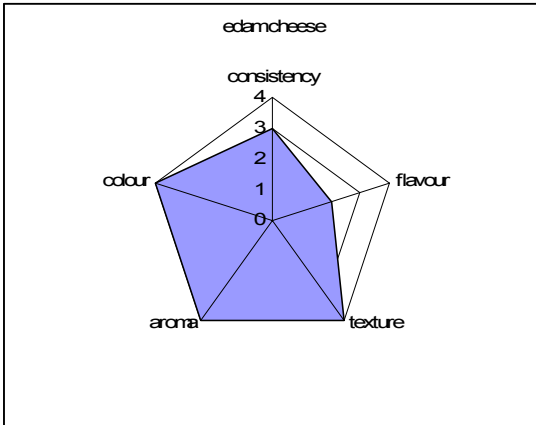
*(5 marks)*

**Question 2 continues on the next page**



Barcode

2 (b) (ii) The results of testing two cheeses for suitability for use in a toasted snack are shown below. Analyse the results and suggest how these may be used by the manufacturer.



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(5 marks)



2 b (iii) Explain how the results of sensory testing are used by manufacturers.

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*(3 marks)*

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**Turn over for the next question**

**Turn over ►**



You are advised to spend about 20 minutes on this question.

3 (a) Name the ingredients that are most suitable for use in each of the products below.

Give a detailed reason for your choices.

<p><b>Sugar for use in a whisked sponge cake</b></p>	<p>Type of sugar ..... <i>(1 mark)</i></p> <p>Reason for choice ..... ..... ..... ..... <i>(2 marks)</i></p>
<p><b>Fat for use in pastry</b></p>	<p>Type of fat ..... <i>(1 mark)</i></p> <p>Reason for choice ..... ..... ..... ..... <i>(2 marks)</i></p>
<p><b>Flour for use in a well risen loaf of bread</b></p>	<p>Type of flour ..... <i>(1 mark)</i></p> <p>Reason for choice ..... ..... ..... ..... <i>(2 marks)</i></p>



**3 (b)** Explain why flour is used as a thickening agent in a basic white sauce.

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*(3 marks)*

**Question 3 continues on the next page**

**Turn over ►**



- 3 (c)** A basic **lasagne** product is made up of layers of pasta, meat sauce and white sauce. In the boxes below, describe **different** ways a basic lasagne product could be developed to meet the needs of the consumers given. You may use notes and / or annotated sketches to show each development idea.

**3 (c) (i)** A development idea for a consumer who is following healthy eating guidelines.

*(4 marks)*

**3 (c) (ii)** A development idea for a consumer who follows a vegetarian diet.

*(4 marks)*

20

You are advised to spend about 22 minutes on this question.



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*Standard component* is the term used to describe ready prepared ingredients.

4 (a) (i) Describe **three** standard components that may be used in chicken curry and rice products.

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(3 marks)

4 (a) (ii) Evaluate the advantages **and** disadvantages of using standard components.

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(4 marks)

**Turn over ►**



4 (b) (i) Results of different control checks on a chicken curry and rice product show the following problems. Complete the table below to show

- **two** causes of each problem
- how each problem may be prevented.

Problem	Cause	How to prevent this problem
The chicken is moist and pink inside.	<p>1.....</p> <p>.....</p> <p>2.....</p> <p>.....</p>	<p>1.....</p> <p>.....</p> <p>2.....</p> <p>.....</p>
An insect is found in the rice before cooking.	<p>1.....</p> <p>.....</p> <p>2.....</p> <p>.....</p>	<p>1.....</p> <p>.....</p> <p>2.....</p> <p>.....</p>

(8 marks)





4 (b) (ii) Explain why food manufacturers use Computer Aided Manufacture (CAM) to help carry out control checks.

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(3 marks)

4 (c) When developing new food products, manufacturers may consider using new materials and nanotechnology.

4 (c) (i) Give **one** example of a food or ingredient which could be developed by using nanotechnology.

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(1 mark)

4 (c) (ii) Explain why some manufacturers would use nanotechnology when developing this food product or ingredient.

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(3 marks)



You are advised to spend about 10 minutes on this question.

5 (a) Manufacturers aim to produce *consistent products*.  
What is meant by a *consistent product*?

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(3 marks)

5 (b) Explain how the following equipment is used to produce a consistent product.

5 (b) (i) A food processor with attachments used for preparing soups



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(3 marks)



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5 (b) (ii) Non stick baking tins when making sponge cakes



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(2 marks)

5 (b) (iii) Electronic scales when making biscuits.



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(2 marks)

10
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Turn over ►



You are advised to spend about 20 minutes on this question.

**6 (a)** Explain the meaning of the following information often seen on the packaging of egg custards.

**6 (a) (i)** Use by 25.10.09

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*(3 marks)*

**6 (a) (ii)** **V**

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*(3 marks)*



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6 (a) (iii) Contains wheat, gluten, egg and milk.

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*(3 marks)*

**Question 6 continues on the next page**

**Turn over ►**



6 (b) Analyse how manufacturers ensure that the packaging they use is environmentally friendly **and** supports sustainable resources.

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*(7 marks)*

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**END OF QUESTIONS**



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