

Write your name here	
Surname	Other names
Centre Number	Candidate Number
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<b>Edexcel GCSE</b>	
<b>Design and Technology:</b> <b>Food Technology</b> <b>Unit 2: Knowledge and Understanding of Food Technology</b>	
Wednesday 23 June 2010 – Afternoon <b>Time: 1 hour 30 minutes</b>	Paper Reference <b>5FT02/01</b>
<b>You do not need any other materials.</b>	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 80.
- 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.

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Turn over ►

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Answer ALL the questions.

For each question 1 to 10, choose an answer A, B, C or D. Put a cross in the box indicating the answer you have chosen . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .

1 The temperature inside a fridge should be at, or below:

- A 10°C
- B 4°C
- C -18°C
- D -40°C

(Total for Question 1 = 1 mark)

2 A dry goods store should be:

- A warm and dry
- B cool and damp
- C cool and dry
- D warm and damp

(Total for Question 2 = 1 mark)

3 Meat is a good source of:

- A protein
- B fibre
- C vitamin C
- D water

(Total for Question 3 = 1 mark)

4 Dietary guidelines are encouraging consumers to:

- A eat less sugar, fat and fibre and eat more salt
- B eat less sugar, salt and fibre and eat more fat
- C eat less sugar, salt and fat, and eat more fibre
- D eat more protein and carbohydrate and less fat and salt

(Total for Question 4 = 1 mark)



5 A dry method of cooking is baking.

Select **one** other dry method of cooking.

- A poaching
- B grilling
- C braising
- D steaming

(Total for Question 5 = 1 mark)

6 **One** of the four things bacteria need in order to grow is:

- A food
- B light
- C ventilation
- D dry atmosphere

(Total for Question 6 = 1 mark)

7 A method of food preservation using high temperatures is:

- A AFD (accelerated freeze drying)
- B sterilisation
- C vacuum packaging
- D chilling

(Total for Question 7 = 1 mark)

8 CAD (computer aided design) can be used within the food industry for which of the following purposes?

- A Cooking and storing foods
- B Monitoring production of food products
- C Controlling the production of food products
- D Nutritional analysis and costing of recipes

(Total for Question 8 = 1 mark)



9 The deficiency disease for vitamin C is:

- A scurvy
- B kwashiorkor
- C anaemia
- D beri beri

(Total for Question 9 = 1 mark)

10 A best before date mark on a food product informs the consumer that it should be:



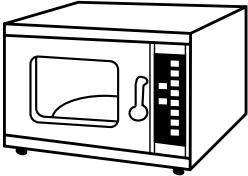
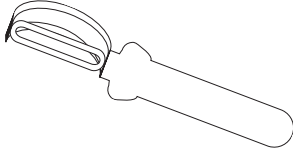
- A sold by that date
- B cooked before that date
- C eaten before that date
- D stored before that date

(Total for Question 10 = 1 mark)



11 (a) The table below shows some tools and equipment.

Complete the table below by giving the missing names and uses.

Tool/Equipment	Name	Use
	Piping bag	(1)
	Wooden spoon	(1)
	(1)	Reheat, cook or defrost foods
	(1)	To remove skin from vegetables and fruit

(b) Flour is one of the basic ingredients used when making sauces.

(i) Name **one** type of flour that can be used in sauce production. (1)

(ii) Flour contains the nutrient carbohydrate.  
Name **one** functional use of carbohydrate in the diet. (1)

(iii) Give **two** reasons for using a sauce in a food product. (2)

1 .....

2 .....



(c) Explain **one** reason why pre-prepared lasagne meals are manufactured using batch production.

(2)

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(d) Explain **one** reason why standard components are used in the production of pre-prepared lasagne meals.

(2)

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(e) State why each of the following additives are used in commercial sauce mixes.

(3)

Preservatives

.....

Flavours

.....

Colours

.....



(f) The following recipe was used to produce a prototype lasagne main meal.

- 25g flour
- 25g butter
- 125ml milk
- 50g cheddar cheese
- 1 onion
- 100g minced beef
- 1 x 175g tin tomatoes
- 1 beef stock cube
- 4 lasagne sheets

Describe **two** modifications that would make the lasagne main meal suitable for a consumer following a CHD (coronary heart disease) diet.

(4)

1 .....

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.....

2 .....

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**(Total for Question 11 = 19 marks)**



**12** A manufacturer is developing a new cake product suitable for young children.

The specification for the cake product is that it must:

- be suitable for young children
- be a single portion
- be a handheld product
- have a range of textures
- demonstrate at least one cake making technique
- include one edible decoration
- include one ingredient high in vitamin C
- include one raising agent.

In the spaces opposite, use sketches and, where appropriate, brief notes to show **two different** design ideas for the cake product that meet the specification points above.

Candidates are reminded that if a pencil is used for diagrams/sketches it must be dark (HB or B).

Coloured pens, pencils and highlighter pens must **not** be used.

**PLEASE DO NOT WRITE OR DRAW IN THIS SPACE.**

**PLEASE USE THE SPACES OPPOSITE FOR YOUR DESIGNS.**





**Design idea 1**

(8)

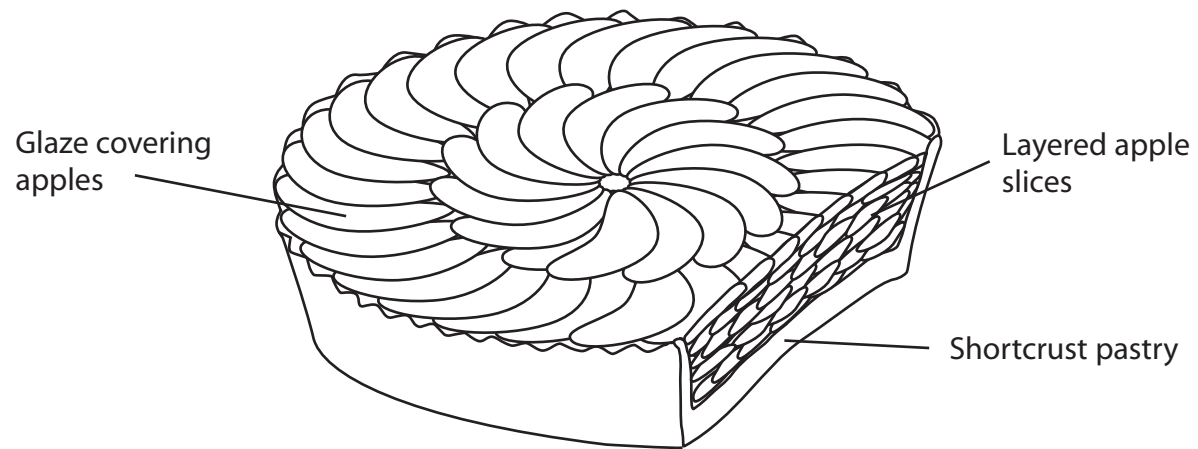
**Design idea 2**

(8)

**(Total for Question 12 = 16 marks)**



13 The diagram below shows a fruit flan.



(a) The fruit flan has a shortcrust pastry case.

Give **one** property of shortcrust pastry that makes it suitable for the case.

Justify your answer.

(2)

Property

Justification

(b) The apples have been prepared using the slicing method.

Give **two** advantages to the manufacturer of using this method of preparation.

(2)

1 .....

2 .....



(c) Explain why a glaze has been applied to the fruit flan.

(2)

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(d) Explain why the fruit flan is successful at meeting the following specification points:

(i) can be eaten hot or cold

(2)

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(ii) has a storage life of five days.

(2)

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\*(e) A food manufacturer produces a range of desserts.

Below are two recipes for a fruit flan.

<b>Recipe A (ingredients only)</b>	<b>Recipe B (ingredients only)</b>
<p><b><i>Pastry case</i></b></p> <p>150g plain flour 75g margarine 35g caster sugar 30ml cold water</p> <p><b><i>Apple filling</i></b></p> <p>200g stewed apples 25g sugar 100g sliced apples</p> <p><b><i>Glaze</i></b></p> <p>Apricot jam</p>	<p><b><i>Pastry case</i></b></p> <p>300g ready made sweet shortcrust pastry</p> <p><b><i>Apple filling</i></b></p> <p>300g apples 25g sugar Potato starch Wheat flour Acidity regulator Salt</p> <p><b><i>Glaze</i></b></p> <p>Sugar Glucose syrup Vegetable fat</p>



Evaluate recipe A compared with recipe B for use by a food manufacturer.

(6)

Handwriting practice area consisting of 20 horizontal dotted lines for writing an answer.

**(Total for Question 13 = 16 marks)**

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**14** (a) Designers have to consider environmental issues when designing packaging for food.

Give **two** environmental issues that must be considered when designing food packaging.

(2)

1 .....

2 .....

(b) Give **three** pieces of information that are required, by law, on a food label.

(3)

1 .....

2 .....

3 .....

(c) Quorn is a protein food produced by biotechnology. Quorn is often used by vegetarians as a meat substitute.

(i) Explain **one** reason why people choose to be vegetarians.

(2)

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(ii) State **two** disadvantages to the consumer of producing food by biotechnology.

(2)

1 .....

2 .....



(iii) Explain **two** benefits to the manufacturer of producing food by biotechnology.

(4)

1 .....

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2 .....

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\* (d) Consumers expect their food to be safe and of consistent quality.

Discuss the ways in which food manufacturers can ensure that all the products they make or serve are safe **and** of consistent quality.

(6)

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**(Total for Question 14 = 19 marks)**

**TOTAL FOR PAPER = 80 MARKS**

