



**Tuesday 3 June 2014 – Afternoon**

**GCSE DESIGN AND TECHNOLOGY Food Technology**

**A525/01** Sustainability and Technical Aspects of Designing and Making

Candidates answer on the Question Paper.

**OCR supplied materials:**

None

**Other materials required:**

None

**Duration:** 1 hour 30 minutes

**MODIFIED LANGUAGE**



Candidate forename		Candidate surname	
-----------------------	--	----------------------	--

Centre number						Candidate number				
---------------	--	--	--	--	--	------------------	--	--	--	--

### INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions in Section A **and** Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **80**.
- Your quality of written communication is assessed in questions marked with an asterisk (\*).
- This document consists of **20** pages. Any blank pages are indicated.

**SECTION A**

Answer **all** questions.

You are advised to spend about 40 minutes on this section.

**On questions 1 – 5 circle your answer.**

- 1** One advantage of using aluminium as a packaging material is that it:
- (a) Cannot be recycled
  - (b) Biodegrades
  - (c) Can be recycled
  - (d) Comes from a sustainable source [1]
- 2** The function of sugar in the diet is:
- (a) For growth
  - (b) For energy
  - (c) To prevent scurvy
  - (d) To prevent high blood pressure [1]
- 3** Fairtrade products mean that:
- (a) The producer gets a fair price for the product
  - (b) Supermarkets sell the food at a fair price
  - (c) The producer does not get a fair price for the product
  - (d) The products are only produced in Africa [1]
- 4** Which could be sold as free range?
- (a) Milk
  - (b) Cheese
  - (c) Chicken
  - (d) Fish [1]
- 5** Food materials that decompose within the environment are called:
- (a) Toxic
  - (b) Non-toxic
  - (c) Non-biodegradable
  - (d) Biodegradable [1]

6 The symbol shown stands for:



..... [1]

7 Give **one** reason why we should not eat foods high in sugar.

..... [1]

8 Name **one** dish which could be made using leftover chicken.

..... [1]

9 State **one** reason why we are encouraged to compost raw vegetables.

..... [1]

10 Give **one** reason why we should reduce the amount of salt we eat.

..... [1]

Decide whether the statements below are **true** or **false**.

Tick (✓) the box to show your answer.

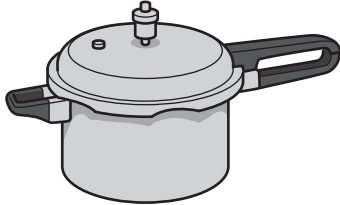
	True	False	
11 Cardboard cannot be recycled	<input type="checkbox"/>	<input type="checkbox"/>	[1]
12 Rhubarb is in season in the spring	<input type="checkbox"/>	<input type="checkbox"/>	[1]
13 Artificial pesticides can be used on organic foods	<input type="checkbox"/>	<input type="checkbox"/>	[1]
14 Best before dates are used on fresh meat products	<input type="checkbox"/>	<input type="checkbox"/>	[1]
15 Steaming vegetables retains more vitamin C than boiling	<input type="checkbox"/>	<input type="checkbox"/>	[1]

**16** Consumers are encouraged to reduce the amount of energy used in the home.

**(a)** Name the pieces of equipment shown below.



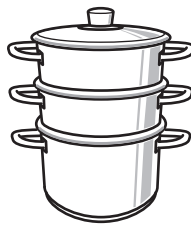
.....



.....

**[2]**

**(b)** Fig. 1 shows a steamer.



**Fig. 1**

Describe how a steamer can reduce the amount of energy used when cooking meals.

.....

.....

.....

.....

..... **[2]**

- (c) Give **two** reasons why manufacturers should consider the amount of energy used when making food products.

1 .....

.....

2 .....

.....

[2]

- (d) Fig. 2 shows a chicken, leek and bacon pie and the main ingredients used.

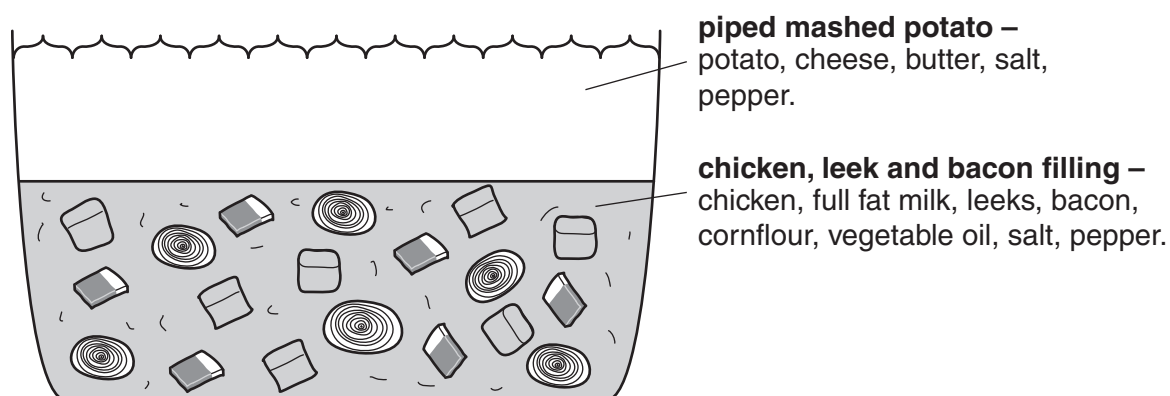


Fig. 2

Complete the chart below to show how the ingredients could be adapted for a consumer who cannot eat dairy products.

Ingredient to be removed	To be replaced with

[4]

- (e) The chicken, leek and bacon pies are sold in an ovenable paperboard container.

Give **two** advantages of using ovenable paperboard.

1 .....

.....

2 .....

.....

[2]

- (f) Give **two** reasons why the manufacturer may choose to use ingredients from the UK.

1 .....

.....

2 .....

.....

[2]

**Fig. 3**

..... [6]

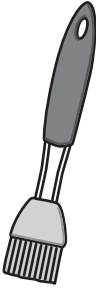
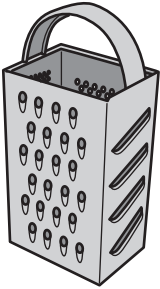
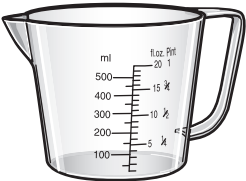
**Total [35]**

**8**  
**SECTION B**

Answer **all** the questions.

You are advised to spend 50 minutes on this section.

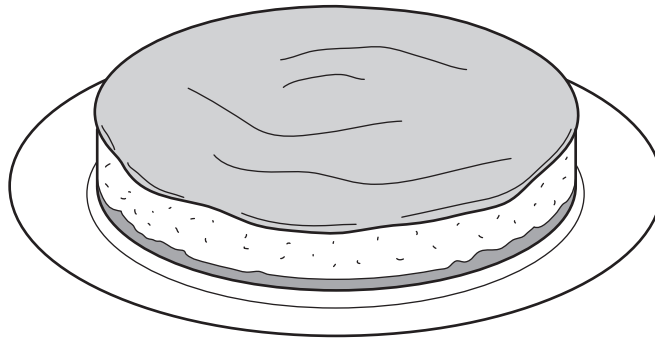
- 17 (a)** Complete the chart below to name the equipment and give an example of how it is used. The first one has been done for you.

	Equipment	Example of use
	Pastry brush	To brush egg on the top of a pie
		
		

**[4]**



(b) Fig. 4 shows a lemon cheesecake.



**Fig. 4**

Explain why product development is necessary for a lemon cheesecake.

.....

.....

.....

.....

..... [2]

(c) Fig. 5 shows the ingredients in a lemon cheesecake and the results from a tasting panel.

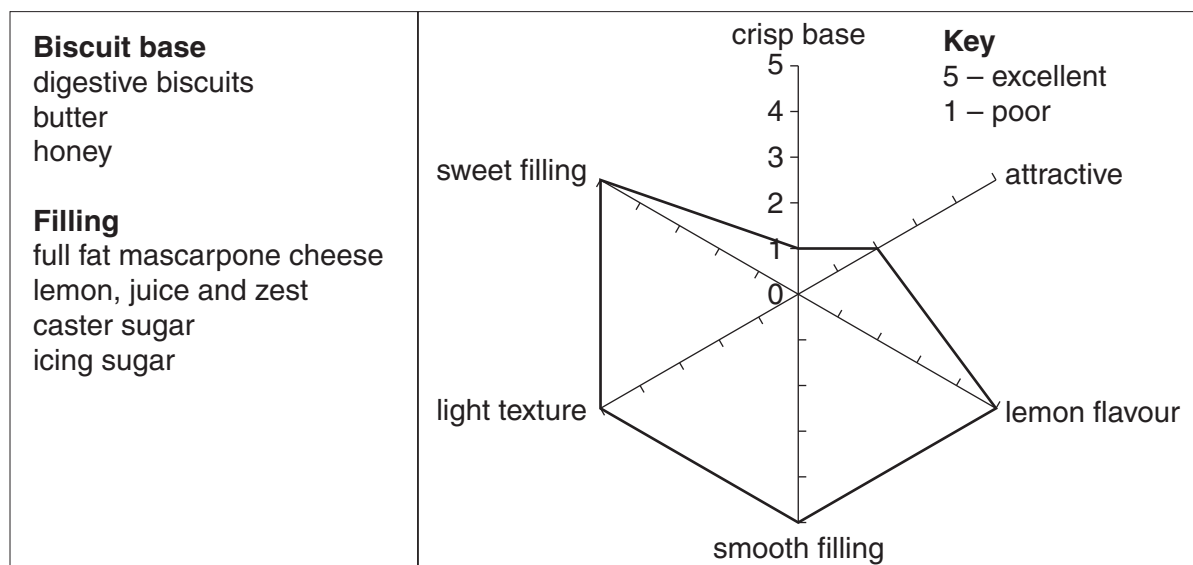


Fig. 5

Complete the chart below to show **two** areas which need improving and suggest **one** different way of doing this for each.

Area to be improved	How it could be improved
1	
2	

[4]

- (d) The lemon cheesecake is to be batch produced.  
Give **three** reasons why this is a suitable method of production.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

- (e) The lemon cheesecake is stored in a refrigerator.

- (i) State the correct temperature for a refrigerator.

..... °C [1]

- (ii) Give **one** reason why the lemon cheesecake should be stored in a refrigerator.

.....

..... [1]

**Total [15]**

18 Fig. 6 shows a range of bread products.



Fig. 6

(a) Name **one** raising agent used in bread products.

..... [1]

(b) Explain why strong flour is used to make bread.

.....  
 .....  
 ..... [2]

(c) Fig. 7 shows the nutritional information for three different types of bread.

Nutrient	White bread (per 100 g)	Wholemeal bread (per 100 g)	Brown bread (per 100 g)
Energy (KJ)	1005 KJ	990 KJ	975 KJ
Protein	8.1 g	11.0 g	8.3 g
Carbohydrate	45.4 g	39.1 g	46.0 g
Fat	1.9 g	2.2 g	1.4 g
Fibre	3.2 g	6.6 g	4.3 g
Salt	0.9 g	1.0 g	0.4 g

Fig. 7

(i) State the bread with the highest amount of fibre.

..... [1]

(ii) State the bread with the highest amount of carbohydrate.

..... [1]

(d) State **two** functions of fibre in the diet.

1 .....

2 .....

[2]

(e) A small bakery wants to produce a new bread product.

The design specification points for the product are:

- hand held
- high in fibre
- attractive
- contain different textures

Use labelled sketches and/or notes to design a new bread product that meets the specification.

State clearly how your design meets the specification points.

**Do not draw any packaging.**

**Name of product** .....

[6]

- (f) State **two** quality control checks that would need to be done when a bread product is manufactured.

1 .....

2 .....

[2]

**Total [15]**

19 Fig. 8 shows a kitchen with many hazards.



Fig. 8

(a) State **four** hazards shown in Fig. 8.

- 1 .....
- 2 .....
- 3 .....
- 4 .....

[4]

[6]



(c) Name **two** bacteria which cause food poisoning.

1 .....

2 ..... [2]

(d) State **one** symptom of food poisoning.

..... [1]

(e) State **two** conditions bacteria need to reproduce.

1 .....

2 ..... [2]

**Total [15]**

**END OF QUESTION PAPER**

**ADDITIONAL ANSWER SPACE**

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

A large rectangular area for writing answers. It features a vertical solid line on the left side, creating a margin. The rest of the area is filled with horizontal dotted lines, providing space for writing. The lines are evenly spaced and extend across the width of the page.



**PLEASE DO NOT WRITE ON THIS PAGE**



**Copyright Information**

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.