

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE

A525/01

DESIGN AND TECHNOLOGY

Food Technology

**Sustainability and Technical Aspects of
Designing and Making**

TUESDAY 3 JUNE 2014: Afternoon

**DURATION: 1 hour 30 minutes
plus your additional time allowance**

MODIFIED ENLARGED

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the boxes on the first page. 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.

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 (*).

Any blank pages are indicated.

BLANK PAGE

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 refuse to 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]

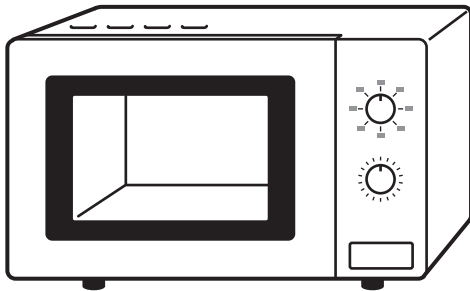
Decide whether the statements below are TRUE or FALSE.

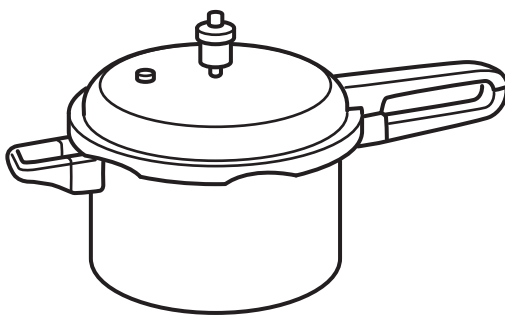
Tick (✓) the box to show your answer.

	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.

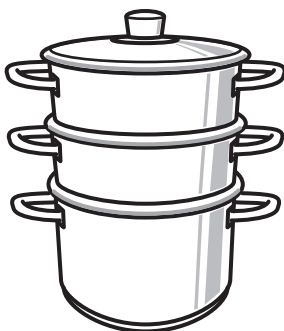




[2]

(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

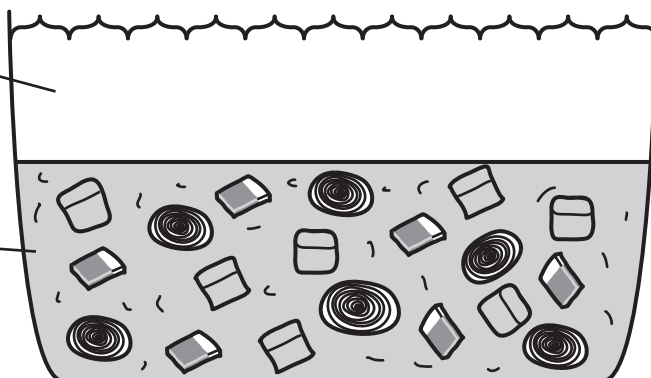
[2]

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

FIG. 2

PIPED MASHED POTATO –
potato, cheese, butter, salt,
pepper.

**CHICKEN, LEEK AND
BACON FILLING –**
chicken, full fat milk,
leeks, bacon, cornflour,
vegetable oil, salt, pepper.



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]

(g)* Fig. 3 shows a newspaper headline.

FIG. 3

In the UK around 43% of men and 33% of women are overweight.

Explain how consumers can rethink their diets so that they do not become overweight. [6]

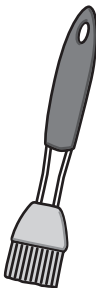
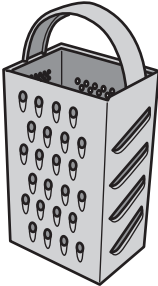
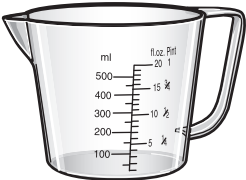
TOTAL [35]

SECTION B

Answer ALL the questions.

You are advised to spend 50 minutes on this section.

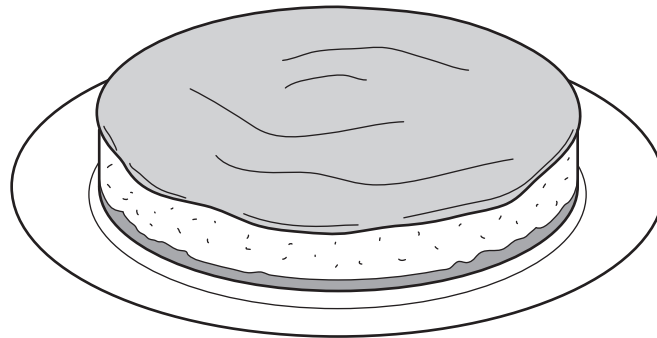
17 (a) Complete the chart below to name the equipment and give an example of how it is used. The first one has been done for you.

	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

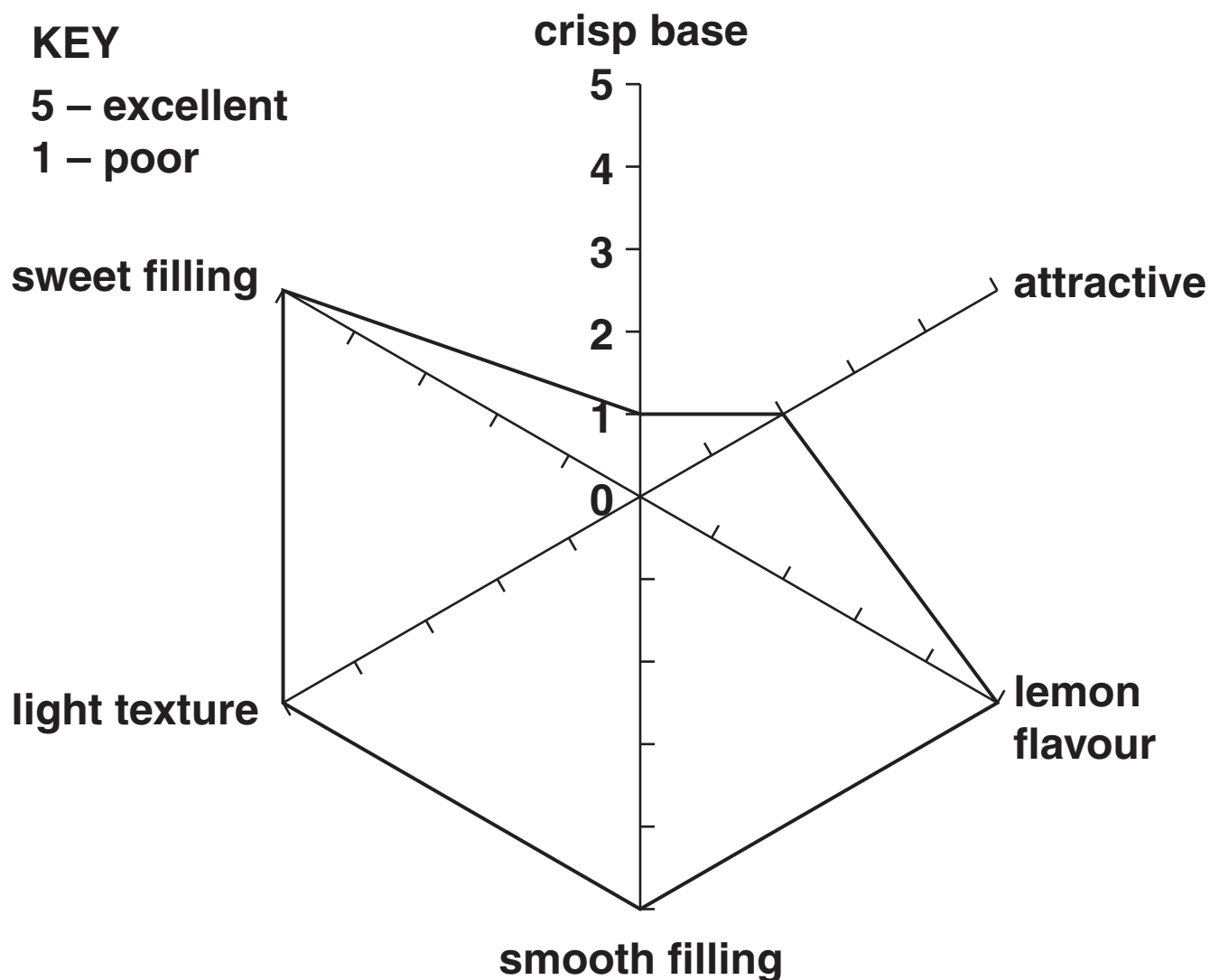


Explain why product development takes place on a lemon cheesecake.

[2]

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

FIG. 5



Biscuit base
digestive biscuits
butter
honey

Filling
full fat mascarpone cheese
lemon, juice and zest
caster sugar
icing sugar

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 (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.

FIG. 7

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

(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 carried out 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]

(b)* Explain what advice you would give to consumers when buying and storing food. [6]

[illegible]

(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.

[illegible]



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