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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE**

A522/01

DESIGN AND TECHNOLOGY

Food Technology

Sustainable Design

FRIDAY 13 JANUARY 2012: Morning

DURATION: 1 hour

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

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 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.**

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 60.**
- **Your quality of written communication is assessed in the question marked with an asterisk (*).**

SECTION A

Answer ALL questions.

You are advised to spend about 15 minutes on this section.

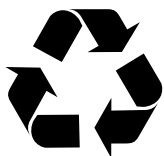
On questions 1 – 5 circle your answer.

- 1 Which letter goes before the number to show there are additives in a product? [1]**
 - (a) E**
 - (b) Z**
 - (c) A**
 - (d) G**

- 2 Food miles are the distance food has travelled: [1]**
 - (a) Between the farm where it was produced and your home**
 - (b) From the shop to home**
 - (c) From the farm to the factory**
 - (d) From the factory to the shop**

- 3 Fairtrade products are: [1]**
- (a) Always produced in Africa**
 - (b) Sold so the grower and producer are paid a fair price**
 - (c) Produced on an organic farm**
 - (d) Made in a factory with exploited labour**
- 4 When are raspberries in season in the UK? [1]**
- (a) January**
 - (b) October**
 - (c) November**
 - (d) July**
- 5 What is meant by biodegradable? [1]**
- (a) Cannot be broken down by bacteria**
 - (b) Broken down totally by bacteria**
 - (c) A micro organism that cannot be seen under a microscope**
 - (d) A type of mould**

6 The symbol shown stands for: [1]



7 Give ONE reason we should rethink the amount of fat we eat. [1]

8 What type of bacteria cause food poisoning? [1]

9 State why some people do not buy foods containing artificial additives. [1]

10 Give ONE reason why we should reduce our salt intake. [1]

Decide whether each of the following statements is TRUE or FALSE.

Tick (✓) the box to show your answer.

	<u>TRUE</u>	<u>FALSE</u>	
11 We should be refusing foods high in saturated fats	<input type="checkbox"/>	<input type="checkbox"/>	[1]
12 Using a steamer can reduce the amount of energy used when cooking food	<input type="checkbox"/>	<input type="checkbox"/>	[1]
13 All foods purchased at farm shops are organic	<input type="checkbox"/>	<input type="checkbox"/>	[1]
14 Card can be made from a sustainable source	<input type="checkbox"/>	<input type="checkbox"/>	[1]
15 Waste that is not recycled is put into landfill sites	<input type="checkbox"/>	<input type="checkbox"/>	[1]
		Total	[15]

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TURN OVER FOR SECTION B

SECTION B

Answer ALL questions.

**You are advised to spend about 45 minutes on
this section**

16 Fig. 1 shows a list of foods left over after Christmas.

cooked turkey

sausages

carrots

sprouts

potatoes

tomatoes

butternut squash

double cream

cream cheese

crème fraiche

Cheddar cheese

oranges

bananas

sponge cake

Fig. 1

(a) (i) Using NOTES and / or SKETCHES show how some of these foods could be used in a new product.

The product must:

- **be attractive**
- **a sweet or savoury product**
- **use TWO or more foods from Fig. 1 [3]**

**(c) Date marks are used on food products.
Give TWO reasons why a 'use by date' will be on a
fresh turkey product. [2]**

1 _____

2 _____

(d) Describe how fresh turkey products should be stored in the home. [2]

(e) State ONE reason why food manufacturers put a 'display until' date on a fresh food product. [1]

Total [15]

17 Consumers may choose foods depending on how they are produced.

(a) State TWO different ways of farming chicken. [2]

1 _____

2 _____

(b) Explain how the farming methods of chickens may affect consumer choice. [2]

- (c) Fig. 2 shows a soya product made from non genetically modified soya beans.

Fig. 2



- (i) State what is meant by genetically modified. [1]

- (ii) Give TWO benefits for developing genetically modified foods. [2]

1 _____

2 _____

(iii) Give TWO concerns consumers have about the development of genetically modified foods. [2]

1 _____

2 _____

(d) Soya beans can be grown in rainforests. Give TWO reasons why the manufacturer uses soya beans from the USA. [2]

1 _____

2 _____

(e) Soya milk can be used by people on special diets.

State ONE special diet this would be suitable for and give ONE reason for this. [2]

Special diet _____

Reason _____

- (f) State ONE nutrient found in soya milk.
State ONE function of the nutrient.

Nutrient [1] _____

Function [1] _____


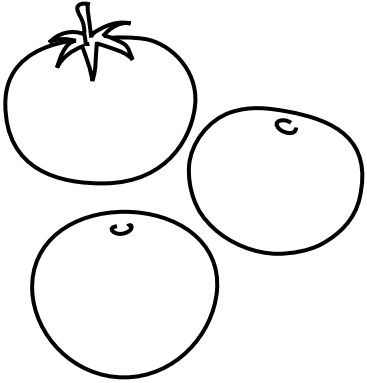
Total [15]

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TURN OVER FOR QUESTION 18

18 Fig. 3 shows information about two different types of tomatoes.

Fig. 3

	Norfolk Piccolo Tomatoes	Value Tomatoes
1 Picture of the product	1 	1 
2 Information on production of the tomatoes	2 Grown by John Brown in Norfolk. These cherry tomatoes are ripened on the vine for an intense flavour and juicy sweet taste	2 Packed and grown in Belgium
3 Packaging materials	3 Plastic tray and wrapping	3 Plastic tray and wrapping
4 Weight	4 250 g (84p per 100 g)	4 200 g (60p per 100 g)
5 Cost	5 £2.10	5 £1.20
6 Best before date	6 23 June	6 26 June

(a) Give TWO reasons why a consumer may buy the Norfolk Piccolo Tomatoes instead of the Value Tomatoes. [2]

1 _____

2 _____

(b) Give ONE reason why a consumer might buy the Value Tomatoes. [1]

(c) Tomatoes are a good source of vitamin C.
Give THREE functions of vitamin C in the diet. [3]

1 _____

2 _____

3 _____

(d) Fig. 4 shows a symbol found on the packaging of the Norfolk Piccalo Tomatoes. [1]

Fig. 4



(i) Name the symbol shown in Fig. 4.

(ii) Explain the meaning of this symbol. [2]

(e) Give TWO ways of making the packaging more environmentally friendly. [2]

1 _____

2 _____

- (f) Food manufacturers are continually developing their range of products.

Fig. 5 shows ingredients in a ready to use tomato and bacon creamy sauce.

Fig. 5

tomato puree (64%) tomatoes (8%) onion (3%) lemon juice garlic puree natural flavouring stabiliser	streaky bacon (10%) butter corn starch parsley dried egg yolk black pepper glucose syrup	full fat cream cheese (10%) sugar salt colour (paprika extract) flavouring cheese powder
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Complete the chart below to show TWO different ways the nutritional content of the sauce could be improved. [4]

INGREDIENT IN THE SAUCE	INGREDIENT CHANGED / MODIFIED	REASON
1	1 _____ _____	1 _____ _____
2	2 _____ _____	2 _____ _____

Total [15]

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