

**Friday 13 January 2012 – Morning**

**GCSE DESIGN AND TECHNOLOGY Food Technology**

**A522/01 Sustainable Design**

Candidates answer on the Question Paper.

**OCR supplied materials:**

None

**Other materials required:**

None

**Duration: 1 hour**



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**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 **60**.
- Your quality of written communication is assessed in the question marked with an asterisk (\*).
- This document consists of **16** pages. Any blank pages are indicated.

**Section A**

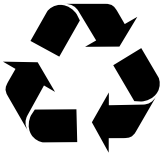
Answer **all** questions.

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?  
(a) E  
(b) Z  
(c) A  
(d) G [1]
- 2** Food miles are the distance food has travelled:  
(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 [1]
- 3** Fairtrade products are:  
(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 [1]
- 4** When are raspberries in season in the UK?  
(a) January  
(b) October  
(c) November  
(d) July [1]
- 5** What is meant by biodegradable?  
(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 [1]

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.

	<b>True</b>	<b>False</b>	
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]**

## 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	double cream	oranges
sausages	cream cheese	bananas
carrots	crème fraiche	sponge cake
sprouts	Cheddar cheese	
potatoes		
tomatoes		
butternut squash		

**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]

(ii) State the name of **one** additional ingredient that could be added to complete the product.

Ingredient .....

[1]



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

1 .....

.....

.....

2 .....

.....

..... [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]**

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**PLEASE DO NOT WRITE ON THIS PAGE**

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

(a) State **two** different ways of farming chicken.

- 1 .....
- 2 ..... [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.

- 1 .....
- .....
- 2 .....
- ..... [2]



(iii) Give **two** concerns consumers have about the development of genetically modified foods.

1 .....

.....

2 .....

..... [2]

(d) Soya beans can be grown in rainforests.  
Give **two** reasons why the manufacturer uses soya beans from the USA.

1 .....

.....

2 .....

..... [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.

Special diet .....

Reason .....

.....

..... [2]

(f) State **one** nutrient found in soya milk.  
State **one** function of the nutrient.

Nutrient .....

Function ..... [2]

**Total [15]**

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



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

Fig. 3

(a) Give **two** reasons why a consumer may buy the Norfolk Piccolo Tomatoes instead of the Value Tomatoes.

1 .....

.....

.....

2 .....

.....

..... [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.

- 1 .....
- 2 .....
- 3 ..... [3]

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



Fig. 4

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

..... [1]

(ii) Explain the meaning of this symbol.

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

(e) Give **two** ways of making the packaging more environmentally friendly.

- 1 .....
- .....
- 2 .....
- ..... [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.

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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**Fig. 5**

Complete the chart below to show **two** different ways the nutritional content of the sauce could be improved.

<b>Ingredient in the sauce</b>	<b>Ingredient changed / modified</b>	<b>Reason</b>
	..... .....	..... .....
	..... .....	..... .....

[4]

**Total [15]**







