

Friday 11 January 2013 – Afternoon

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	
-----------------------	--	----------------------	--

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 **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** The following information is not required on packaging by law:
- (a) Ingredients
 - (b) Bar code
 - (c) Date marking
 - (d) Storage information **[1]**
- 2** Life cycle analysis means:
- (a) The stages of developing a food product from concept to disposal
 - (b) Disposal of the product
 - (c) The stages of developing a food product from manufacturing to disposal
 - (d) Recycling the product **[1]**
- 3** Supermarkets encourage consumers to use 'bags for life' to:
- (a) Increase the amount of plastic bags going to landfill sites
 - (b) Increase the amount of non-sustainable resources used
 - (c) Reduce the amount of plastic packaging going to landfill sites
 - (d) Increase their sales of food **[1]**
- 4** Most left over foods will need to be used within:
- (a) 45 minutes
 - (b) 1 week
 - (c) 24 hours
 - (d) 1 month **[1]**

5 The carbon footprint of food is the:

- (a) Amount of carbon emissions produced when growing, processing and transporting food
- (b) Gas produced when growing food
- (c) Amount of energy used to cook the food
- (d) Amount of food thrown away

[1]

6 The symbol shown stands for:



..... [1]

7 Name **one** Fairtrade food product.

..... [1]

8 State the name of the gas produced when food waste rots in landfill sites.

..... [1]

9 State **one** British vegetable in season in winter.

..... [1]

10 State **one** reason why we should eat less sugar.

..... [1]

4

Decide whether each of the following statements is **true** or **false**.

Tick (✓) the box to show your answer.

	True	False	
11 We should buy foods which have lots of plastic packaging.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
12 A microwave can reduce the amount of fuel used when cooking food.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
13 Chemical pesticides can be used on organic foods.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
14 Aluminium cans can be recycled.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
15 Composting is an example of secondary recycling.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
			Total [15]

5
SECTION B

Answer **all** questions.

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

16 Fig. 1 shows a logo used on fish products.



Fig. 1

(a) Give **two** reasons why a consumer would choose to purchase sustainably sourced fish products.

1

.....

2

.....

[2]

(b) Tick (✓) the number of portions of fish we are advised to eat each week.

10	2	5
----	---	---

[1]

(c) State **one** nutrient found in oily fish.

..... [1]

(d) (i) A food manufacturer wants to introduce a new fish product for children.

The product must:

- appeal to children
- include a casing
- use a named fish
- include a vegetable

Using notes and/or sketches show **one** idea for this product.

Do not draw the packaging.

(ii) State **one** method of cooking the new fish product.

..... [1]

(iii) Explain how the fish product you have designed should be stored at home.

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

(e) Fresh fish is a high risk food.

State **four** food hygiene rules to be followed when preparing and cooking high risk foods.

1

.....

2

.....

3

.....

4

.....

[4]

Total [15]

17 Fig. 2 shows two advertisements encouraging consumers to shop locally or buy British produce.



Fig. 2

(a)* Discuss the advantages and disadvantages of purchasing foods which have been produced locally or in Britain.

Marks will be awarded for the quality of written communication in your answer.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[6]

(b) Food producers have to consider packaging for their products.

Fig. 3 shows apples packed using cardboard and a clear potato starch film.

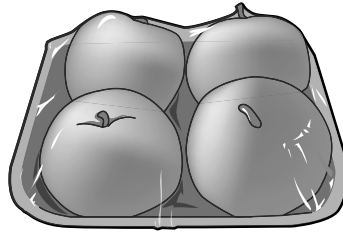


Fig. 3

(i) Give **two** advantages of using cardboard as a packaging material.

- 1
 -
 - 2
 -
- [2]

(ii) Give **two** advantages of using a potato starch film as a packaging material.

- 1
 -
 - 2
 -
- [2]

(c) State **one** method manufacturers use to show how packaging should be disposed.

- [1]

- (d) Date marking is used on the packaging of food products.
Explain what is meant by a 'use by' and a 'best before' date.

Use by

.....

.....

.....

Best before

.....

.....

.....

[4]

Total [15]

11
BLANK PAGE

Question 18 begins on page 12

PLEASE DO NOT WRITE ON THIS PAGE

18 Fig. 4 shows the ingredients in a luxury cottage pie.

Meat Sauce	Mashed Potato	Crunchy Topping
Irish beef onion beef stock red wine carrot celery flour tomato puree Worcester sauce beef dripping cornflour pepper	Jersey potatoes double cream New Zealand butter salt pepper	Canadian cheddar cheese white bread

Fig. 4

(a) State **four** ways the fat content of the cottage pie could be reduced.

- 1
 -
 - 2
 -
 - 3
 -
 - 4
 -
- [4]

(b) Give **two** reasons why we are being encouraged to reduce the amount of fat we eat.

- 1
 -
 - 2
 -
- [2]

(c) The manufacturer wants to reduce the carbon footprint of the cottage pie. Give **two** ways the carbon footprint of the ingredients could be reduced.

1

.....

2

.....

[2]

(d) Current trends show the numbers of vegetarians are increasing. State **three** ways the cottage pie could be adapted for vegetarians.

1

.....

2

.....

3

.....

[3]

(e) Explain **two** reasons why the manufacturer of the cottage pie needs to consider the amount of energy used to produce the product.

1

.....

.....

.....

.....

2

.....

.....

.....

.....

[4]

Total [15]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

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

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

A large area of the page is reserved for writing, featuring a solid vertical line on the left side and horizontal dotted lines extending across the 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) 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.