

**Monday 3 June 2013 – 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 |  |
|--------------------|--|-------------------|--|

|               |  |  |  |  |  |                  |  |  |  |  |
|---------------|--|--|--|--|--|------------------|--|--|--|--|
| 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** We should refuse to eat foods which are:
- (a) High in fibre
  - (b) High in salt
  - (c) Low in fat
  - (d) Low in sugar [1]
- 2** Foods should be reheated to above:
- (a) 63°C
  - (b) 72°C
  - (c) 8°C
  - (d) 120°C [1]
- 3** Product globalisation refers to food products which are:
- (a) Only available in England
  - (b) Available across the world
  - (c) Only available in Europe
  - (d) Made in the United Kingdom [1]
- 4** A consumer's carbon footprint will be increased by:
- (a) Buying vegetables from large supermarkets
  - (b) Buying vegetables from local farmers' markets
  - (c) Using local seasonal ingredients
  - (d) Growing their own vegetables [1]

5 Manufacturers can reduce the environmental impact of waste by:

- (a) Reducing the amount of packaging materials they use
- (b) Increasing the amount of packaging materials they use
- (c) Taking all waste materials to landfill sites
- (d) Reducing the amount of recyclable materials they use

[1]

6 The symbol shown stands for:



..... [1]

7 State what is meant by built-in obsolescence in a food product.

..... [1]

8 State the colour of the chopping board which should be used to prepare fish.

..... [1]

9 State what is meant by tertiary recycling.

..... [1]

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

..... [1]

4

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

Tick (✓) the box to show your answer.

|   | <b>True</b>              | <b>False</b>             |                   |
|---|--------------------------|--------------------------|-------------------|
| <b>11</b> Teabags can be put in to the compost bin      | <input type="checkbox"/> | <input type="checkbox"/> | <b>[1]</b>        |
| <b>12</b> Sugar is high in fibre                        | <input type="checkbox"/> | <input type="checkbox"/> | <b>[1]</b>        |
| <b>13</b> Drying does not extend the shelf life of food | <input type="checkbox"/> | <input type="checkbox"/> | <b>[1]</b>        |
| <b>14</b> One function of protein in the diet is growth | <input type="checkbox"/> | <input type="checkbox"/> | <b>[1]</b>        |
| <b>15</b> All food packaging is biodegradable           | <input type="checkbox"/> | <input type="checkbox"/> | <b>[1]</b>        |
|   |                          |                          | <b>Total [15]</b> |

5  
**SECTION B**

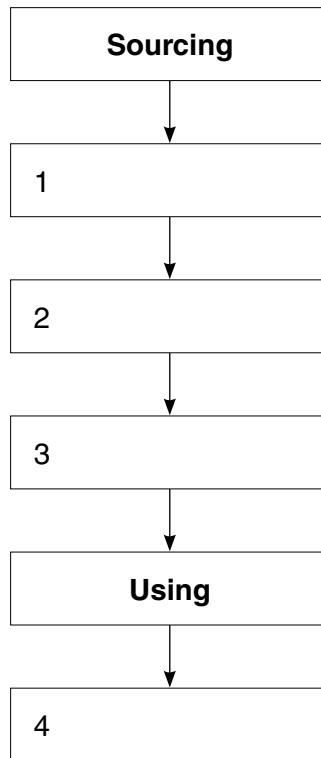
Answer **all** questions.

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

**16 (a)** The diagram below shows the stages of the life cycle analysis of a product.

Complete the diagram by placing the following stages in the correct order.

|         |          |              |            |
|---------|----------|--------------|------------|
| Selling | Disposal | Distribution | Production |
|---------|----------|--------------|------------|



[4]

(b) A food manufacturer wants to produce a sustainable chicken pie.

The main ingredients in the pie are:

| Pastry  | Filling   |
|---|---|
| plain flour<br>white fat<br>butter<br>water<br>salt | chicken<br>water<br>onion<br>mushrooms<br>carrot<br>tomato puree<br>chicken stock<br>salt<br>pepper<br>thyme<br>oil<br>garlic |

Give **three** factors the manufacturer should consider when choosing the ingredients.

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

[3]

(c) The chicken pie is to be cooked in an aluminium foil dish.

State **two** advantages of using aluminium foil.

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

[2]

(d) Fig. 1 shows the chicken pie.



**Fig. 1**

The chicken pie is to be packaged so it has minimum impact on the environment.

(i) State **one** suitable packaging material.

Packaging material: ..... [1]

(ii) Give **three** reasons for your choice.

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

(e) The pie can be stored in a fridge or freezer.

Complete the chart below to show the correct storage temperatures.

|         |    |
|---------|----|
| Fridge  | °C |
| Freezer | °C |

**[2]**

**Total [15]**

17 Fig. 2 shows wind turbines on a supermarket roof.

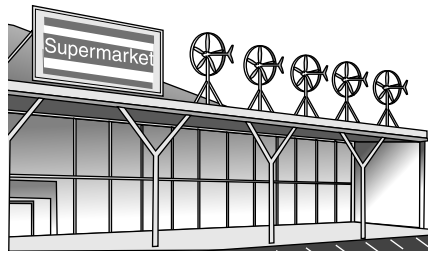


Fig. 2

(a) Give **three** reasons why the supermarket has chosen to install wind turbines.

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

[3]



(b) Fig. 3 shows some examples of bags for life which have been introduced by supermarkets.



Fig. 3

Explain **two** reasons why many supermarkets have introduced a bags for life scheme.

1 .....

.....

.....

.....

.....

2 .....

.....

.....

.....

[4]

(c) Many foods sold in supermarkets are imported.

Give **four** reasons why some people do not buy imported foods.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

[4]

(d) The cost of energy is rising for consumers.

Describe **two** ways consumers can reduce energy consumption when cooking food.

1 .....

.....

.....

.....

2 .....

.....

.....

.....

[4]

**Total [15]**

11  
**BLANK PAGE**

**Question 18 begins on page 12**

**PLEASE DO NOT WRITE ON THIS PAGE**



(b) A supermarket wants to introduce a new product to support the use of Fairtrade ingredients. The product must:

- include **one** Fairtrade ingredient
- be suitable for families
- be attractive
- be stored at room temperature

Using notes and/or sketches show **one** idea for this product.  
Do not draw the packaging.

[4]

(c) Name and draw **one** symbol which shows consumers that packaging can be recycled.

Name .....

[2]

(d) State **two** pieces of information on food packaging that is required by law.

1 .....

2 .....

[2]

(e) State **one** piece of voluntary information which could be put on food packaging.

..... [1]

**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 margin line on the left side and horizontal dotted lines for writing. The lines are evenly spaced and extend across the width of the page.

A large rectangular area with a solid vertical line on the left and horizontal dotted lines, providing a space for writing answers.



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