

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**  
**GCSE**

**A522/01**

**DESIGN AND TECHNOLOGY**

**Food Technology**

**Sustainable Design**

**MONDAY 3 JUNE 2013: Morning**

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

**MODIFIED ENLARGED**

<b>Candidate forename</b>		<b>Candidate surname</b>	
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<b>Centre number</b>						<b>Candidate number</b>				
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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 60.**
- **Your quality of written communication is assessed in the question marked with an asterisk (\*).**
- **Any blank pages are indicated.**

**BLANK PAGE**

## **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]

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

## **SECTION B**

**Answer ALL questions.**

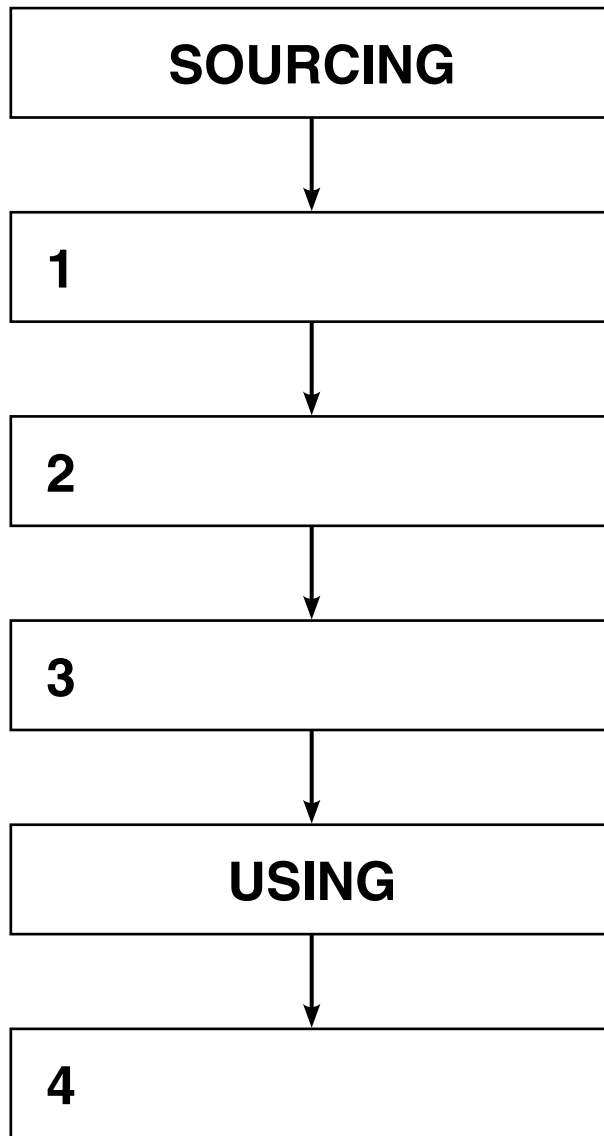
**You are advised to spend about 45 minutes on this section.**

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

**Complete the diagram by placing the following stages in the correct order. [4]**

<b>Selling</b>	<b>Disposal</b>	<b>Distribution</b>	<b>Production</b>
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**(b) A food manufacturer wants to produce a sustainable chicken pie.**

**The main ingredients in the pie are:**

<b>PASTRY</b>	<b>FILLING</b>
<b>plain flour white fat butter water salt</b>	<b>chicken water onion mushrooms carrot tomato puree chicken stock salt pepper thyme oil garlic</b>

**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** \_\_\_\_\_

\_\_\_\_\_

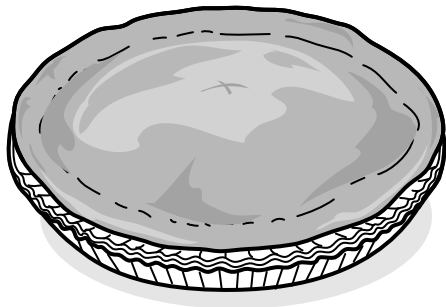
**2** \_\_\_\_\_

\_\_\_\_\_

**[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. [2]**

<b>Fridge</b>	<b>°C</b>
<b>Freezer</b>	<b>°C</b>

**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]**

18 Fig. 4 shows a Fairtrade logo.

FIG. 4



**(a)\* Explain how the Fairtrade organisation helps to address moral issues within society.**  
**Marks will be awarded for the quality of written communication in your answer.** [6]

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**(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. [2]**

**Name** \_\_\_\_\_

- (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.**

[illegible]



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