



**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
DESIGN AND TECHNOLOGY**

**A522**

**Food Technology**  
Sustainable Design

**Wednesday 23 June 2010  
Afternoon**

**Duration: 1 hour**

Candidates answer on the Question Paper

**OCR Supplied Materials:**  
None

**Other Materials Required:**  
None



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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**INSTRUCTIONS TO CANDIDATES**

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions in Section A **and** Section B.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

**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 **12** pages. Any blank pages are indicated.

## Section A

Answer **all** questions.

You are advised to spend 15 minutes on this section.

On questions 1 – 5 **circle** your answer.

- 1 Which of the following **should not** be put into compost bins?
- (a) Egg shells
  - (b) Vegetable peelings
  - (c) Polystyrene food packaging
  - (d) Cardboard
- [1]
- 2 Which of the following is **not** reusing?
- (a) Plastic carrier bags for bin liners
  - (b) Plastic cartons to store other products in
  - (c) Plastic carrier bags for shopping more than once
  - (d) Putting vegetables into compost bins
- [1]
- 3 HACCP is a:
- (a) Food safety system
  - (b) Quality control system
  - (c) Method of preserving foods
  - (d) Computer control system
- [1]
- 4 Which of the following could be produced 'free range'?
- (a) Tomatoes
  - (b) Eggs
  - (c) Potatoes
  - (d) Cheese
- [1]
- 5 Which food is a good source of iron?
- (a) Chicken
  - (b) Liver
  - (c) Oranges
  - (d) Potatoes
- [1]

6 The symbol shown stands for:



..... [1]

7 State what is meant by a product being recycled.

..... [1]

8 Fig. 1 shows part of a label from a food package.

<b>Storage instructions</b> Keep refrigerated Once opened use immediately		<b>Product code</b>
<b>Display until</b> 01 July	<b>Use by</b> 02 July	L8237 03:45 4N

**Fig. 1**

State **one** piece of information that is required by law.

..... [1]

9 Name the piece of equipment used to ensure food is reheated to a safe temperature.

..... [1]

10 State **one** function of protein in the diet.

..... [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 Organic food production does not use chemicals.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
12 We should be reducing our intake of hydrogenated fats.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
13 Canning is used to preserve foods.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
14 There is an increase in the number of households recycling.	<input type="checkbox"/>	<input type="checkbox"/>	[1]
15 Food tins cannot be recycled.	<input type="checkbox"/>	<input type="checkbox"/>	[1]

**Total [15]**

**Section B**

Answer **all** questions.

You are advised to spend 45 minutes on this section.

**16** Product analysis is important when developing new food products.

**(a)** Give **three** reasons why a manufacturer would carry out product analysis.

Reason 1 ..... [1]

Reason 2 ..... [1]

Reason 3 ..... [1]

**(b)** Fig. 2 shows the packaging for a Chicken Tikka Masala.



**Fig. 2**

**(i)** State the country this dish originated from.

..... [1]

**(ii)** Give **three** reasons why consumers could choose products which come from other cultures.

Reason 1 ..... [1]

Reason 2 ..... [1]

Reason 3 ..... [1]

(c) Information about the chicken farmer, where and how he farms is on the product label.

Give **two** reasons why food manufacturers put this information on product labels.

Reason 1 .....  
 ..... [1]

Reason 2 .....  
 ..... [1]

(d) Fig. 3 shows the ingredients used in the Chicken Tikka Masala.

**Basmati Rice (42%);**  
**Tikka Masala Sauce** (double cream, water, onion, tomato purée, full fat yoghurt, ginger, garlic, cornflour, paprika, salt, coriander, turmeric, chilli powder, cumin, cinnamon, clove, black pepper, bay leaf salt, garam masala, flavour enhancer E621 monosodium glutamate);  
**Char-grilled Chicken Breast (18%)** (Marinated in full fat yoghurt and paprika, coriander, salt and pepper)

**Fig. 3**

The Chicken Tikka Masala is to be changed so it can be promoted as part of a healthier eating range of food products.

Complete the chart below to show **two** different ways this could be done.

Ingredient in Chicken Tikka Masala	Ingredient changed to	Reason
	..... ..... [1]	..... ..... [1]
	..... ..... [1]	..... ..... [1]

(e) The manufacturer has decided to sell the Chicken Tikka Masala as a cook-chill product.

Explain how this will affect the product's shelf life.

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

**Total [15]**

**Turn over**

17 The energy costs to produce foods and food products are increasing.

Fig. 4 shows a steamer which could be used in the home.

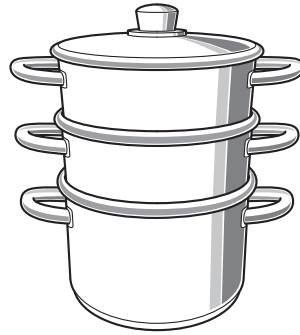


Fig. 4

(a) Explain how using a steamer can reduce energy consumption when cooking meals.

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

(b) Give **three** ways other than using a steamer, a family could reduce their consumption of energy when cooking food.

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

(c) Fig. 5 shows a symbol from the front of a microwave.

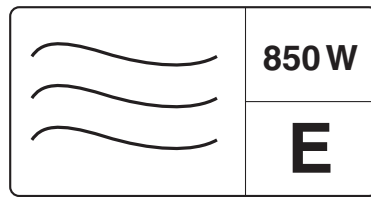


Fig. 5

Give **two** reasons why this information is useful to the consumer when using a microwave.

Reason 1 ..... [1]

Reason 2 ..... [1]

(d) Explain why food manufacturers need to consider the amount of energy used to produce foods.

..... [4]

(e) Explain why some people choose not to purchase imported food products.  
 ..... [4]

**Total [15]**

18 (a) Food manufacturers often put nutritional labelling on food packaging.

Give **one** reason for this.

.....  
..... [1]

(b) Fig. 6 shows the ingredients in two different yoghurt products.

Yoghurt A	Yoghurt B
Semi-skimmed yoghurt Fresh strawberries	Skimmed milk yoghurt Strawberry flavouring Modified starch Sweetener – aspartame Artificial colourings

Fig. 6

Explain why yoghurt **A** is more suitable for children aged 5 to 11 years.

.....  
.....  
.....  
.....  
.....  
.....  
..... [4]

(c) Explain why we should reduce the amount of the following foods in our diet.

(i) Fat .....  
.....  
..... [2]

(ii) Sugar .....  
.....  
..... [2]





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