



# Cambridge IGCSE™

CANDIDATE  
NAME

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CENTRE  
NUMBER

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## FOOD & NUTRITION

0648/13

Paper 1 Theory

May/June 2021

2 hours

You must answer on the question paper.

No additional materials are needed.

### INSTRUCTIONS

- Section A: answer **all** questions.
- Section B: answer **all** questions.
- Section C: answer **one** question.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.

### INFORMATION

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages.

**Section A**

Answer **all** questions.

You are advised to spend no longer than 45 minutes on Section A.

- 1 (a) Name the term used to describe the chemical process by which the body converts food into energy.

..... [1]

- (b) Explain **two** different ways in which occupation may affect an individual's need for energy.

1 .....

.....

2 .....

.....

[2]

- (c) Energy balance is taking in the correct amount of energy to meet the needs of the body.

State **three** health effects of having an energy intake that is too low.

1 .....

2 .....

3 .....

[3]

[Total: 6]

- 2 (a) Name **one** vitamin that can help blood to clot.

..... [1]

- (b) Name **one** vitamin that acts as an antioxidant.

..... [1]

- (c) Name **one** mineral that can help prevent anaemia.

..... [1]

- (d) Name **one** mineral that can help prevent goitre.

..... [1]

- (e) Name **one** mineral that can help prevent tooth decay.

..... [1]

[Total: 5]

3 (a) Hydrogen is a chemical element in carbohydrates.

Name **two** other chemical elements in carbohydrates.

1 .....

2 .....

[2]

(b) Cereals are starchy foods.

Name **three** other different foods that contain starch.

1 .....

2 .....

3 .....

[3]

(c) Name **two** types of cereal that should be avoided by people with coeliac disease.

1 .....

2 .....

[2]

(d) Name the substance in these cereals that cannot be digested by people with coeliac disease.

..... [1]

[Total: 8]

4 (a) Describe **three** physical effects of heat on butter.

1 .....

2 .....

3 .....

[3]

(b) State **three** characteristics of a saturated fat.

1 .....

2 .....

3 .....

[3]

(c) Name **three** food sources that are high in monounsaturated fat.

1 .....

2 .....

3 .....

[3]

(d) Give **two** reasons why fat becomes rancid.

1 .....

2 .....

[2]

[Total: 11]

5 Adding legumes and pulses to recipes can help a person suffering with constipation.

(a) Suggest **three** other different ways that the diet could be altered to help a person suffering with constipation.

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

(b) State **three** possible health effects if a person suffering with constipation does not alter their diet.

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

[Total: 6]

6 Water is essential for the body to function effectively.

Identify **four** different ways in which water helps the body function effectively.

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

Section B

Answer **all** questions.

7 The following ingredients can be used to make shortcrust pastry.

- 200 g plain flour
- 50 g white fat
- 50 g butter
- pinch of salt
- cold water

(a) Give **one** reason for each of the following rules when making shortcrust pastry:

- (i) sieve flour ..... [1]
- (ii) use fingertips for rubbing in ..... [1]
- (iii) use plain flour ..... [1]
- (iv) use butter ..... [1]
- (v) do not add too much water ..... [1]
- (vi) allow pastry to relax in a cool place before baking. .... [1]

(b) The shortcrust pastry can be used to make a fruit pie. The pie can be glazed with egg or milk before baking to give it an attractive appearance.

Suggest **four** other methods that can be used before baking to give the pie an attractive appearance.

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

(c) Describe what happens to the pastry when the fruit pie is baked.

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

[Total: 14]

8 Steaming is a method of cooking which uses water vapour.

Give **six** disadvantages of steaming as a method of cooking.

1 .....  
.....  
2 .....  
.....  
3 .....  
.....  
4 .....  
.....  
5 .....  
.....  
6 .....  
..... [6]

9 An important feature of kitchen design is the work triangle.

State what is meant by the work triangle and explain why it is an important feature of kitchen design.

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

10 Convenience foods have been partly or totally prepared by a food manufacturer.

Suggest **seven** reasons why some people may not wish to use convenience foods.

1 .....  
.....  
2 .....  
.....  
3 .....  
.....  
4 .....  
.....  
5 .....  
.....  
6 .....  
.....  
7 .....  
..... [7]





**Section C**

Answer **either** Question 13 **or** 14.

- 13** Identify problems that may occur for people who follow a vegan diet. Discuss how careful meal planning can overcome these problems. [15]

**OR**

- 14** Discuss nutritional reasons why milk and milk products are considered important foods for a three-year-old child. Suggest different ways of including milk and milk products in meals as part of a balanced diet for a three-year-old child. [15]

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A series of horizontal dotted lines for writing answers.

[Total: 15]

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