



Cambridge IGCSE™

CANDIDATE
NAME

CENTRE
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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
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- 3
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- 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.

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..... [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

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2

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3

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4

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5

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6

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[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.

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.....
.....
.....
..... [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
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2
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3
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4
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5
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6
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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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