



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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FOOD AND NUTRITION

0648/13

Paper 1 Theory

October/November 2015

2 hours

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

Section A

Answer **all** questions.

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

Section B

Answer **all** questions.

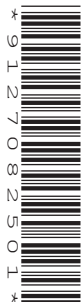
Section C

Answer **either** Question 7(a) **or** 7(b).

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **13** printed pages and **3** blank pages.



Section A

Answer **all** questions.

1 (a) Name the **four** main chemical elements which make up protein.

- 1
- 2
- 3
- 4 [2]

(b) State **three** functions of protein in the body.

- 1
- 2
- 3 [3]

(c) Complete the following sentences which describe the digestion of protein.

In the stomach, acid provides suitable conditions to start the digestion of protein. The enzyme pepsin then converts protein to and the enzyme clots milk.

In the duodenum, the enzyme, produced by the pancreas, continues to breakdown protein. In the, the enzyme erepsin from intestinal fluid completes the breakdown of protein to [3]

(d) Explain what happens to protein when heated.

-
-
-
- [2]

(e) Define the terms *high biological value (HBV) protein* and *low biological value (LBV) protein*. Give **two** examples of **each**.

HBV

.....

example 1

example 2

LBV

.....

example 1

example 2 [4]

(f) Explain ways in which vegans can obtain sufficient amounts of HBV protein in their diet.

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.....

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.....

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.....

.....

..... [5]

[Total: 19]

2 (a) (i) Name **two** animal sources of iron.

1

2

[1]

(ii) Name **two** plant sources of iron.

1

2

[1]

(b) (i) Name the pigment which gives blood its red colour.

.....[1]

(ii) Give the function of the pigment named in (b)(i).

.....

.....[1]

(c) (i) Name the deficiency disease caused by a lack of iron.

.....[1]

(ii) State **two** symptoms of the disease named in (c)(i).

1

2

[2]

(d) (i) Name the vitamin needed for the absorption of iron.

name of vitamin

[1]

(ii) Name **one** fruit and **one** vegetable source of the vitamin given in (d)(i).

fruit source

vegetable source

[1]

[Total: 9]

3 (a) State **two** reasons for including salt (sodium chloride) in the diet.

- 1
-
- 2
-[2]

(b) Describe **two** situations where people might require additional salt.

- 1
-
- 2
-[2]

(c) Give **two** symptoms of a diet deficient in salt.

- 1
- 2[2]

(d) Some people are advised to reduce salt in their diet. Using herbs and spices is one way of following this advice.

(i) Suggest **four** other ways of reducing salt in the diet.

- 1
- 2
- 3
- 4[2]

(ii) Write an informative paragraph on the use of herbs and spices in cooking.

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.....[4]

[Total: 12]

[Turn over

Section B

Answer **all** questions.

- 4 (a) Complete the table by naming **two** further categories of food available from a fresh fish counter. Complete the examples. Two examples have been given for you.

category	example 1	example 2
	haddock	
		mackerel
shellfish		

[6]

- (b) Name **two** fat-soluble vitamins which can be found in fish. Give a function of each vitamin.

vitamin 1

function

.....

vitamin 2

function

.....[4]

- (c) State **two** points you would look for when buying fresh fish.

1

2[2]

- (d) Name **two** methods of preserving fish and explain the principles of preservation involved.

method 1

principles

.....

.....

method 2

principles

.....

.....[6]

(e) (i) Discuss the benefits of coating fish in batter.

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.....[4]

(ii) Deep-frying can be dangerous. Give safety advice, with reasons, when using this method of cooking.

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.....[5]

(iii) Describe how to treat a burn on the hand caused by hot fat.

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.....[2]

(iv) Describe how to deal with a deep-fat fryer which has caught fire.

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

[Total: 31]

5 The following ingredients can be used to make a Swiss roll:

- 3 eggs
- 75 g plain flour
- 75 g caster sugar

(a) Describe, with reasons, the method of making the Swiss roll mixture.

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.....[4]

(b) The Swiss roll mixture is heated by convection and conduction when baking.

Explain how each of these methods transfers heat to the Swiss roll.

convection

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conduction

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.....[4]

[Total: 8]

6 Suggest points to consider when:

(a) choosing a new cooker;

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..... [3]

(b) disposing of kitchen waste.

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..... [3]

[Total: 6]

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