



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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FOOD AND NUTRITION

0648/12

Paper 1 Theory

October/November 2016

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 12(a) **or** 12(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 **12** printed pages.

Section A

Answer **all** questions.

1 Define the term *balanced diet*.

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

[Total: 1]

2 (a) Name **four** elements from which proteins are formed.

1 2
3 4 [2]

(b) Explain what is meant by complementary proteins. Give **two** examples of dishes containing complementary proteins.

.....
.....
.....
example 1
example 2 [4]

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

1
2
3 [3]

(d) Name **two** deficiency diseases caused by a lack of protein.

1
2 [2]

(e) Explain what happens to excess protein in the body.

.....
.....
.....
.....
..... [3]

(f) Describe what happens to protein when it is heated.

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

(g) (i) Name the enzyme found in the **stomach** which converts protein to peptides.

..... [1]

(ii) Name the enzyme which clots milk.

..... [1]

(iii) Name the enzyme produced by the **pancreas** which converts proteins to peptides.

..... [1]

(iv) Name the enzyme which converts peptides to amino acids.

..... [1]

[Total: 20]

3 State **one** function in the body of the following minerals:

(a) iron;

..... [1]

(b) chloride;

..... [1]

(c) iodine;

..... [1]

(d) phosphorus.

..... [1]

[Total: 4]

4 (a) State **two** functions of vitamin A.

1

2 [2]

(b) Name **two** sources of vitamin A.

1 2 [1]

[Total: 3]

5 (a) Non-starch polysaccharide (NSP)/dietary fibre is essential for a healthy diet.

Name **four** good sources of NSP.

1 2

3 4 [2]

(b) Give reasons for the importance of NSP in the diet.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

[Total: 7]

5

6 Give guidance for planning and serving meals for an elderly convalescent person. Include reasons for your advice.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

[Total: 5]

Section B

Answer **all** questions.

7 Raising agents are important to give mixtures a light texture.

State **three** different methods of using carbon dioxide to raise mixtures. Give a different example of a dish for each method.

method 1

example

method 2

example

method 3

example

[6]

[Total: 6]

8 State, with examples, **five** reasons for cooking food.

reason 1

.....

example

reason 2

.....

example

reason 3

.....

example

reason 4

.....

example

reason 5

.....

example

[10]

[Total: 10]

- 9 Explain how convection and radiation transfer heat when cooking food. Give an example of a dish for each method.

convection

.....

.....

.....

.....

example

radiation

.....

.....

.....

.....

example

[8]

[Total: 8]

10 A basic recipe for shortbread biscuits uses the following ingredients:

50 g caster sugar
100 g butter
150 g plain flour

(a) State **one** method which could be used to make the biscuits.

..... [1]

(b) State **two** different functions of each of the named ingredients used in the biscuits.

ingredient	function
sugar	1
	2
butter	1
	2

[4]

(c) Explain how the basic recipe ingredients could be adapted for the following special diets:

(i) a person with coeliac disease;

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

(ii) a person with diabetes;

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

(iii) a person with coronary heart disease (CHD).

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

(d) Give advice, with a reason, for the storage of these biscuits.

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

(e) Suggest **two** ways to vary the flavour of the basic recipe.

1

2

[2]

[Total: 12]

11 Discuss, with reasons, factors to consider when:

(a) choosing kitchen knives;

.....
.....
.....
.....
.....
..... [3]

(b) caring for kitchen knives;

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

(c) disposing of kitchen waste.

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

[Total: 9]

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