



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
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FOOD AND NUTRITION

0648/13

Paper 1 Theory

October/November 2017

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 10(a) **or** 10(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 11 printed pages and 1 blank page.

Section A

Answer **all** questions.

1 State the difference between *malnutrition* and *undernutrition*.

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

[Total: 2]

2 (a) Explain why the following groups of people require higher levels of protein in their diet:

(i) children;
..... [1]

(ii) athletes;
..... [1]

(iii) women who are breast-feeding.
..... [1]

(b) Name **two** different sources of high biological value (HBV) protein.

1 2 [2]

(c) Describe the action of trypsin during the digestion of protein.

..... [1]

(d) Name **one** deficiency disease caused by a lack of protein.

..... [1]

(e) Define the following terms:

(i) *denaturation*;
..... [1]

(ii) *coagulation*.
..... [1]

[Total: 9]

3 (a) State **one** difference between fats and oils.

..... [1]

(b) Give **four** functions of fat in the body.

1

2

3

4

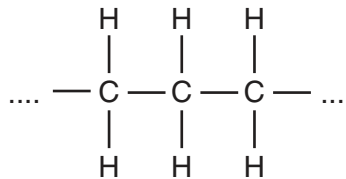
[4]

(c) Describe the action of lipase during the digestion of fat.

.....

..... [1]

(d) The diagram shows part of the structure of a fatty acid.



Name the type of fat produced by this kind of fatty acid.

..... [1]

(e) Explain why eating too much fat could cause heart disease.

.....

.....

.....

..... [2]

[Total: 9]

4 Complete the following table.

mineral	function	problem caused by a deficiency	source
calcium	formation of bones and teeth		
iron			liver
iodide		goitre	
sodium			salt

[8]

[Total: 8]

5 Explain the effects of the following temperatures on bacteria:

(a) -18°C ;

..... [1]

(b) above 75°C

..... [1]

[Total: 2]

6 (a) Scurvy is caused by a deficiency of vitamin C.

Describe **four** symptoms of scurvy.

- 1
- 2
- 3
- 4 [4]

(b) Explain, with reasons, how to prepare and cook green cabbage to retain its vitamin C content.

.....
.....
.....
.....
.....
.....
.....
.....
.....
..... [6]

[Total: 10]

Section B

Answer **all** questions.

7 (a) Biscuits can be made by the creaming method.

Name **two** other methods which could be used to make biscuits.

- 1
- 2 [2]

(b) A basic recipe for making plain biscuits uses:

- 100g flour
- 50g fat
- 50g sugar
- 1 egg yolk

Suggest, with a reason, a suitable type of each of the following ingredients for making the biscuits.

(i) type of flour
reason [2]

(ii) type of fat
reason [2]

(iii) type of sugar
reason [2]

(c) Suggest **three** ways to decorate the biscuits after baking.

- 1
- 2
- 3 [3]

(d) Biscuits are often packaged in paperboard or card.

Give **four** advantages of using this type of packaging material.

- 1
- 2
- 3
- 4 [4]

(e) Nutritional information is often given on a food label.

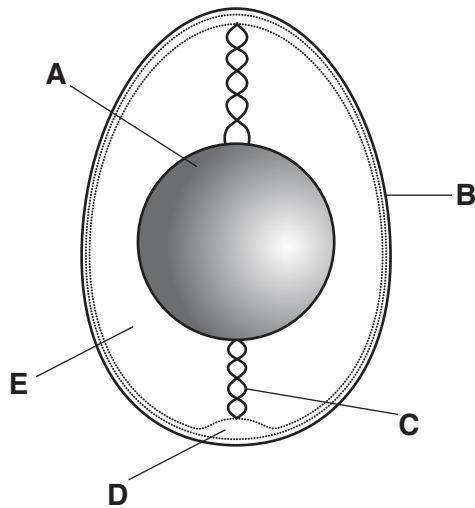
List **five** other pieces of information which may be found on a food label.

- 1
- 2
- 3
- 4
- 5

[5]

[Total: 20]

8 (a) Name the parts of an egg labelled **A–E**.



- A
- B
- C
- D
- E

[5]

(b) Give **four** guidelines to follow when storing eggs.

- 1
- 2
- 3
- 4

[4]

(c) Eggs can be used to add nutritive value to dishes.

Name **three** other functions of eggs in cooking. Give an example in each case.

function 1

example

function 2

example

function 3

example

[6]

(d) Identify **two** groups of people who may be put at risk by eating eggs. Give reasons for your answers.

group 1

group 2

reasons

.....

.....

[4]

[Total: 19]

9 (a) Name a type of vegetarian that does **not** eat eggs.

..... [1]

(b) Give **five** reasons why some people choose to follow a vegetarian diet.

1

2

3

4

5

[5]

[Total: 6]

Section C

Answer **either** Question 10(a) **or** 10(b).

10 (a) Describe and explain the specific nutritional needs of an elderly person. Suggest ways in which the elderly can save money when shopping for food. [15]

OR

(b) Describe and explain the following aspects of microwave ovens:

(i) how food is cooked in a microwave oven;

(ii) disadvantages of cooking in a microwave oven;

(iii) safety when using a microwave oven. [15]

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[Total: 15]

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