



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

CANDIDATE  
NAME

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CENTRE  
NUMBER

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**FOOD AND NUTRITION**

**0648/12**

Paper 1 Theory

**May/June 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 8(a) **or** 8(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 (a) Explain the difference between *undernutrition* and *overnutrition*.

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

(b) (i) Name **two** diseases caused by undernutrition.

1 .....  
2 ..... [2]

(ii) Name **two** effects on health caused by overnutrition.

1 .....  
2 ..... [2]

[Total: 6]

2 Describe how the following nutrients work together in the body:

(a) carbohydrates and B group vitamins;

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

(b) vitamin C and iron;

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

(c) sodium and potassium.

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

[Total: 6]

3 (a) List **four** functions of protein in the body.

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

(b) Explain why some proteins have a higher biological value than others.

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

(c) Describe the digestion of protein:

(i) in the stomach; .....  
.....  
.....  
..... [3]

(ii) in the ileum. ....  
.....  
.....  
..... [3]

(d) Explain what happens to protein when it is heated.

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

(e) Suggest **six** advantages of soya beans as a source of protein.

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

..... [6]

[Total: 22]



**Section B**

Answer **all** questions.

5 (a) Give **four** reasons for serving sauces with meals. Give a different example of a dish to illustrate each reason.

reason 1 .....

.....

example .....

reason 2 .....

.....

example .....

reason 3 .....

.....

example .....

reason 4 .....

.....

example .....

[8]

(b) Using the following ingredients, describe how to make a white sauce by the roux method. Give your answer as a series of steps to follow.

- 25 g flour
- 25 g margarine
- 250 ml milk

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[5]

(c) Give **two** reasons why each of the following may occur:

(i) lumps in the finished sauce;

reason 1 .....

.....

reason 2 .....

.....

[2]

(ii) the sauce is thin and runny.

reason 1 .....

.....

reason 2 .....

.....

[2]

[Total: 17]

6 (a) Give **two** reasons for using raising agents.

1 .....

2 ..... [2]

(b) List **four** methods of introducing air into mixtures. Give a different example of a dish to illustrate each method.

method 1 .....

example .....

method 2 .....

example .....

method 3 .....

example .....

method 4 .....

example ..... [8]

(c) List the ingredients used to make baking powder.

.....

.....

..... [3]

(d) Explain why baking powder is stored in an airtight container.

.....

.....

.....

..... [2]

(e) Name the gas produced when baking powder is heated.

..... [1]



(f) Explain how steam can be used as a raising agent.

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

(g) Name **two** dishes which use steam as a raising agent.

1 .....

2 ..... [2]

[Total: 20]

7 List the factors which need to be considered when choosing a new refrigerator.

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.....  
.....  
.....  
..... [8]

[Total: 8]



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