



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

CANDIDATE  
NAME

CENTRE  
NUMBER

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**FOOD AND NUTRITION**

**0648/01**

Paper 1 Theory

**May/June 2013**

**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 ink.

You may use a soft pencil for any diagrams or graphs.

Do not use staples, paper clips, highlighters, 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.

For Examiner's Use	
<b>Section A</b>	
<b>Section B</b>	
<b>Section C</b>	
<b>Total</b>	

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



**Section A**

Answer **all** questions.

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- 1 (a) Proteins are made from amino acids.  
All amino acids contain the elements carbon and hydrogen.

Give **two** other elements found in amino acids.

1 .....

2 ..... [2]

- (b) Milk is an important source of High Biological Value (HBV) protein.  
Define the term *High Biological Value (HBV) protein*.

.....

..... [2]

- (c) (i) Name **one** other animal source of HBV protein.

..... [1]

- (ii) Name **one** non-animal source of HBV protein.

..... [1]

- (d) Identify **four** functions of protein.

1 .....

2 .....

3 .....

4 ..... [4]

**(e)** Describe the digestion and absorption of the protein in milk.

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..... [6]

**2** Milk contains a high proportion of water.

**(a)** State **and** explain **three** of the functions of water in the body.

1 .....

.....

2 .....

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3 .....

..... [6]

**(b)** Name the condition which results from a lack of water in the body.

..... [1]

**(c)** Thirst is a symptom of the condition named in **(b)**.  
Identify **one** other symptom.

..... [1]

3 Carbohydrates and fats are important nutrients for energy production.

(a) Give the energy value of 1g of each of the nutrients named above.

carbohydrate .....

fat ..... [2]

(b) Individuals have different energy requirements.

Explain **four** factors which affect an individual's energy requirement.

factor 1 .....

explanation 1 .....

.....

factor 2 .....

explanation 2 .....

.....

factor 3 .....

explanation 3 .....

.....

factor 4 .....

explanation 4 .....

..... [4]

(c) Define the term *energy balance*.

.....

..... [1]

4 Current nutritional advice is to reduce the amount of sugar in the diet.

(a) Suggest **three** ways in which sugar consumption can be reduced.

1 .....

2 .....

3 ..... [3]



**Section B**

Answer **all** questions.

For  
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Use

**5** The following ingredients can be used to make a Victoria sandwich cake:

- 100g self-raising flour
- 100g sugar
- 100g fat
- 2 eggs

**(a)** Name **one** method which could be used to make this cake.

..... [1]

**(b)** Name **one** ingredient which could be used to vary the flavour of the cake.

..... [1]

**(c)** Suggest **two** ways in which the non-starch polysaccharide (NSP)/dietary fibre content of the cake could be increased.

1 .....

2 ..... [2]

**(d)** Name **two** of the gases which will make the cake rise during baking.

1 .....

2 ..... [2]

**(e)** Describe **and** explain other changes which take place when the cake is being baked.

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(f) Give advice on the choice of the following ingredients used for making the cake:

For  
Examiner's  
Use

(i) type of sugar;

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

(ii) type of fat.

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

6 Write an informative paragraph on each of the following:

*For  
Examiner's  
Use*

(a) the use and care of a refrigerator;

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..... [5]

(b) air as a raising agent;

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(c) the advantages and disadvantages of using a microwave oven.

*For  
Examiner's  
Use*

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..... [5]

7 (a) List **four** of the nutrients in red meat.

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

(b) Incorrect cooking of meat can cause toughness.  
State **one** cause of toughness in meat other than incorrect cooking.

..... [1]

(c) Explain how tough meat can be tenderised by moist cooking methods.

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

(d) (i) Name **one** moist method of cooking.

..... [1]

(ii) Name **one** dry method of cooking.

..... [1]

(e) Conduction and convection are two methods of transferring heat when food is being cooked.

(i) Explain **conduction** as a method of transferring heat.

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..... [4]

(ii) Give **one** example of **convection** in cooking.

..... [1]

**[Section B Total: 45]**

**Section C**

Answer **either** 8(a) **or** 8(b).

*For  
Examiner's  
Use*

**Either**

**8 (a)** Discuss the importance of fruit in the diet and suggest ways in which it could be used in the preparation of family meals. [15]

**Or**

**8 (b)** Discuss the importance of eggs in the diet and suggest ways in which they could be used in the preparation of family meals. [15]

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**[Section C Total: 15]**

**[Total for Paper: 100]**





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