



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

October/November 2009

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 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 **or** 9.

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 | |
|--------------------|--|
| Section A | |
| Section B | |
| Section C | |
| Total | |

This document consists of **14** printed pages and **2** blank pages.



Section A

Answer **all** questions.

For
Examiner's
Use

1 (a) Name the elements which combine to form protein.

1 2
3 4
5 6 [3]

(b) State **three** functions of protein.

1
2
3 [3]

(c) Define High Biological Value (HBV) protein.

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

(d) Give **four** examples of HBV protein.

1
2
3
4 [2]

(e) Define Low Biological Value (LBV) protein.

..... [1]

(f) Give **four** examples of LBV protein.

1 2
3 4 [2]

(g) Complete the following sentences which describe the digestion and absorption of protein.

In the stomach, _____ acid creates a suitable medium for the digestion of protein to begin. There are two enzymes in the stomach.

Pepsin converts protein to _____ and _____ clots milk.

In the duodenum, the enzyme _____, produced by the _____ continues to convert protein to _____. In the ileum, the enzyme _____ from _____ juice, completes the breakdown of protein to _____.

Absorption takes place in the ileum. Finger-like projections, known as _____ provide a large surface area. The end products of protein digestion are absorbed into _____. They dissolve in _____ and are carried around the body. [6]

(h) Explain how the body deals with excess protein.

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..... [3]

2 (a) State **three** functions of calcium.

1

2

3 [3]

(b) Name **four** sources of calcium.

1 2

3 4 [2]

(c) Name the deficiency disease which results from a lack of calcium.

..... [1]

3 (a) State **two** functions of vitamin D.

1

2 [2]

(b) Name **four** sources of vitamin D.

1 2

3 4 [2]

(c) The body makes vitamin D when it is exposed to the ultra-violet rays of the sun.

Identify **two** groups of people who will not be able to make vitamin D in this way. In each case, give an explanation.

Group 1

Explanation 1

Group 2

Explanation 2 [2]

4 Explain the particular dietary needs of teenage girls.

*For
Examiner's
Use*

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..... [6]

[Section A Total: 40]

Section B

For
Examiner's
Use

Answer **all** questions.

5 (a) Name **six** nutrients found in red meat.

1 2
3 4
5 6 [3]

(b) List **four** reasons why meat may be tough.

1 2
3 4 [2]

(c) Give **four** ways of tenderising meat before cooking.

1
2
3
4 [2]

(d) Explain how meat becomes tender during cooking.

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..... [3]

(e) Processed soya beans can be used to replace meat. Discuss the advantages and disadvantages of processed soya.

*For
Examiner's
Use*

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..... [5]

6 (a) Name **three** types of convenience food and give **one** example of each.

Type 1

Example 1

Type 2

Example 2

Type 3

Example 3 [3]

(b) State the advantages and disadvantages of convenience food.

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..... [5]

(c) Name **three** pieces of labour-saving equipment which could be found in the kitchen. Give **one** example of the use of each.

Example 1

Use 1

Example 2

Use 2

Example 3

Use 3 [3]

(d) Give advice on the safe use of electrical equipment in the kitchen.

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..... [4]

*For
Examiner's
Use*

7 The following ingredients can be used to make a cake.

- 100g self-raising (SR) flour
- 100g margarine
- 100g sugar
- 2 eggs

For
Examiner's
Use

(a) Describe, with reasons, the method of making and baking the cake.

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..... [5]

(b) Name **two** ingredients which could be added to vary the flavour of the cake.

1

2 [1]

(c) Explain the changes which take place when the cake is baking.

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..... [4]

(d) The cake is heated by convection and conduction when baking.

Explain how each of these methods transfers heat to food.

*For
Examiner's
Use*

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..... [5]

[Section B Total: 45]

Section C

Answer **either** Question 8 **or** Question 9.

8 Discuss different fats and oils and their uses in the preparation of dishes. [15]

OR

9 Discuss eggs and their uses in the preparation of dishes. [15]

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