



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

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FOOD AND NUTRITION

0648/12

Paper 1 Theory

October/November 2015

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) Carbon is a chemical element in carbohydrate. Name **two** other chemical elements found in carbohydrates.

1

2 [1]

- (b) Define the following terms and give **two** examples of each.

(i) *monosaccharide*

.....
.....

example 1

example 2 [2]

(ii) *polysaccharide*

.....
.....

example 1

example 2 [2]

- (c) In the digestive system the enzyme maltase breaks down maltose into glucose.

Maltase: maltose → glucose

Complete the following to show how each enzyme breaks down carbohydrate in the digestive system.

(i) invertase: → glucose and [1]

(ii) lactase: → glucose and [1]

(d) State **six** different ways in which the body uses energy.

- 1
- 2
- 3
- 4
- 5
- 6 [3]

(e) Suggest **two** carbohydrate foods which could be eaten to give:

(i) immediate energy;

- 1
- 2 [1]

(ii) slow release energy.

- 1
- 2 [1]

(f) Discuss the health risks of having an incorrect balance of energy.

-
-
-
-
-
-
-
-
- [4]

(g) State what is meant by *basal metabolic rate (BMR)*.

-
- [1]

[Total: 17]

2 (a) Give **two** functions of vitamin D (cholecalciferol).

- 1
-
- 2
- [2]

(b) Name **four** foods that provide vitamin D.

- 1
- 2
- 3
- 4 [2]

(c) (i) Name the disease suffered by children when there is a lack of vitamin D.

..... [1]

(ii) Describe **two** symptoms of this disease.

- 1
- 2 [1]

(iii) Name **two** other nutrients required for complete absorption of vitamin D.

- 1
- 2 [1]

(d) The body makes vitamin D when it is exposed to sunlight.

With reasons, describe **two** groups of people who do not benefit from the production of vitamin D in this way.

group 1

explanation

.....

.....

group 2

explanation

.....

..... [4]

[Total: 11]

3 (a) Water is vital to life.

(i) Name the condition which results from a deficiency of water in the body.

..... [1]

(ii) Give **two** symptoms of the condition named in (a)(i).

1

2 [1]

(b) State **two** groups of people who may need to increase their water intake. Give a reason in each case.

1

.....

2

..... [2]

(c) Name **four** foods which have a high water content.

1

2

3

4

[2]

[Total: 6]

4 Discuss points to consider when planning meals for the elderly.

.....

.....

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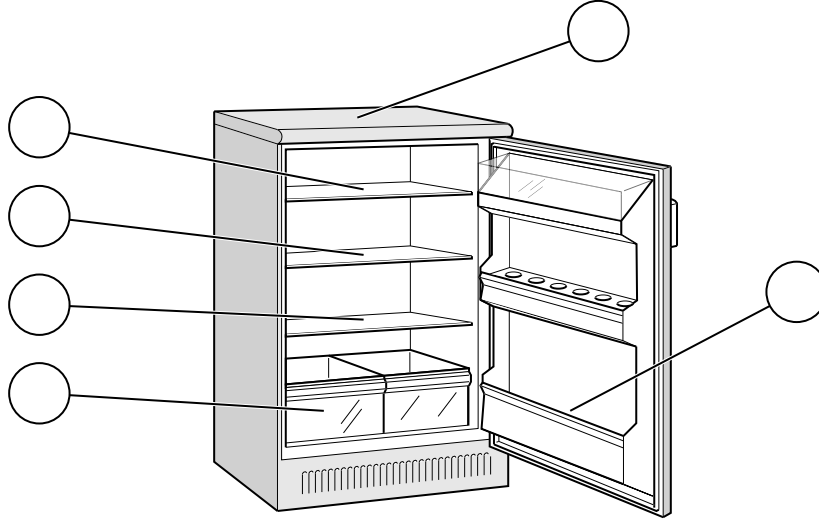
.....

..... [6]

Section B

Answer **all** questions.

5 (a) Put the correct letter in each circle to show where the following foods should be stored.



- A salad vegetables
- B bananas
- C raw minced beef
- D milk
- E trifle
- F cooked chicken

[5]

(b) State **five** guidelines which should be followed when using a refrigerator.

- 1
- 2
- 3
- 4
- 5 [5]

(c) Bacteria can be responsible for food spoilage. Name **two** other microorganisms that cause food spoilage.

- 1
- 2 [2]

(d) List **four** conditions bacteria require for growth.

- 1 2
- 3 4 [2]

[Total: 14]

6 A recipe for a savoury pie with a roux sauce and mashed potato topping uses the following ingredients:

- 25 g plain flour
- 25 g butter
- 250 ml full fat milk
- 50 g ham
- 50 g cooked chicken
- 50 g fried mushrooms
- 50 g cheese
- 200 g mashed potato
- salt and pepper

(a) Name the ingredients used to make the roux sauce.

..... [1]

(b) Explain the process of gelatinisation when making the sauce.

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

(c) Give **two** reasons for each of the following:

(i) lumps in the sauce;

- 1
- 2 [2]

(ii) a thin and runny sauce.

- 1
- 2 [2]

(d) State, with examples, **four** reasons for serving sauces with meals.

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

(e) Suggest **two** ways in which the savoury pie can be made suitable for each of the following people:

(i) someone on a low salt diet;

- 1
-
- 2
- [2]

(ii) someone on a low fat diet;

- 1
-
- 2
- [2]

(iii) someone who is a lacto vegetarian.

- 1
-
- 2
- [2]

(f) List **six** pieces of information you would expect to see on the food label of a savoury pie offered for sale.

- 1 2
- 3 4
- 5 6
- [3]

[Total: 22]

7 (a) Red kidney beans are pulses. Name **six** other pulses.

1

2

3

4

5

6

[3]

(b) Discuss why pulses are an important food source.

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

(c) Describe, with reasons, how to prepare and cook dried red kidney beans.

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

[Total: 9]

Section C

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

- 8 (a) Discuss reasons for preserving food. Explain the methods and principles of freezing vegetables and making fruit jam. [15]

OR

- (b) Discuss how a family on a low income can make sensible choices when shopping, preparing and cooking meals. [15]

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[Total: 15]

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