



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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FOOD AND NUTRITION

0648/01

Paper 1 Theory

May/June 2016

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 **12** printed pages.

Section A

Answer **all** questions.

1 (a) Define the term *metabolism*.

.....[1]

(b) State **three** different uses of energy in the body.

1

2

3

[3]

(c) Fats provide the body with energy.

State **four** other functions of fats in the body.

1

2

3

4

[4]

(d) Starches and sugars are carbohydrates.

Explain **four** health problems that may occur when a person eats too much carbohydrate.

1

2

3

4

[4]

(e) (i) Name **four** sources of high biological value (HBV) protein.

1 2
3 4
[2]

(ii) Name **four** sources of low biological value (LBV) protein.

1 2
3 4
[2]

[Total: 16]

2 (a) Describe the chemical digestion of cooked starch in the mouth.

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

(b) Name the part of the digestive system where fats are digested.

.....[1]

(c) Name the substance which emulsifies fats.

.....[1]

(d) Name an enzyme which breaks down proteins.

.....[1]

(e) Name the end product of protein digestion.

.....[1]

[Total: 6]

3 Complete the following sentences about B group vitamins.

Vitamin B₁ is also known as thiamin. Three good sources of thiamin are yeast extract,
..... and

A deficiency of thiamin can lead to the disease

Vitamin B₂ is also known as It is destroyed by the action of
.....

A deficiency of vitamin B₃ can lead to the disease pellagra. One of the symptoms of this disease is
.....

[6]

[Total: 6]

4 (a) State **three** functions of vitamin A.

- 1
- 2
- 3

[3]

(b) (i) Vitamin A is found in animal foods in the form of retinol.

Name **four** sources of retinol.

- 1 2
- 3 4

[2]

(ii) State the form of vitamin A found in plant foods.

.....[1]

[Total: 6]

Section B

Answer **all** questions.

6 (a) Wheat is a cereal. Name **four** other cereals.

1 2
3 4
[2]

(b) Give **four** reasons for the importance of cereals.

1
2
3
4
[4]

[Total: 6]

7 A basic recipe for making bread uses the following ingredients:

- 200 g strong plain flour
- 12 g fresh yeast or 1 tsp dried yeast
- 1 tsp sugar
- 1 tsp salt
- 125 ml warm water

(a) State **four** different ingredients which could be added to the recipe to increase non-starch polysaccharide (NSP)/dietary fibre.

1
2
3
4
[4]

(b) Give **one** reason why strong plain flour is used.

.....[1]

(c) Give **one** reason why a person with coeliac disease should not eat this bread.

.....[1]

(d) Give **one** reason why the temperature of the water for making the bread is important.

.....[1]

(e) Give **one** function of the salt.

.....[1]

(f) Describe and explain the changes which take place when bread is baked.

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.....[5]

(g) Mould is a microorganism which can grow on bread if it is stored in damp conditions.

Name **two** other conditions which are needed for microorganisms to grow.

1

2

[2]

[Total: 15]

8 (a) Name **three** different methods of frying.

- 1
- 2
- 3

[3]

(b) Give **three** advantages of frying.

- 1
- 2
- 3

[3]

(c) State and explain **five** safety points to follow when frying.

- 1
-
- 2
-
- 3
-
- 4
-
- 5
-

[5]

(d) Describe the basic first aid treatment for a burn caused by hot fat.

-
-
-
-

[2]

[Total: 13]

9 (a) Suggest **four** factors to consider when buying a new microwave oven.

1

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2

.....

3

.....

4

.....

[4]

(b) Give **four** disadvantages of using a microwave oven.

1

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2

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3

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4

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[4]

(c) Describe how heat is transferred when cooking food in a microwave oven.

.....

.....

.....

.....

.....

.....

.....

[3]

[Total: 11]

Section C

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

10 (a) Discuss the importance and functions of food packaging and labelling. [15]

OR

(b) Discuss reasons for preserving food. Explain, with examples, how food spoilage is prevented by removing moisture, reducing temperature and using sugar. [15]

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[Total: 15]

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