



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

--

CENTRE
NUMBER

--	--	--	--	--

CANDIDATE
NUMBER

--	--	--	--



FOOD AND NUTRITION

0648/13

Paper 1 Theory

October/November 2018

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 7(a) **or** 7(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 **14** printed pages and **2** blank pages.

Section A

Answer **all** questions.

1 A balanced diet is essential for good health. Explain what is meant by a *balanced diet*.

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

[Total: 1]

2 Name **one** nutrient which is used by the body to:

- (a) form enzymes and hormones[1]
- (b) absorb calcium[1]
- (c) produce visual purple[1]
- (d) prevent megaloblastic anaemia[1]
- (e) produce thyroxine[1]
- (f) prevent scurvy[1]
- (g) clot blood[1]
- (h) reduce incidence of spina bifida[1]

[Total: 8]

3 Carbohydrates provide the body with energy.

(a) Name **two** other nutrients which provide the body with energy.

1

2

[2]

(b) The body uses energy in many ways.

Name the type of energy used during the following processes in the body.

(i) movement[1]

(ii) brain function[1]

(c) Give **three** different factors that may affect a person's energy needs.

1

2

3

[3]

(d) Name **three** enzymes involved in the digestion of carbohydrates.

1

2

3

[3]

(e) B group vitamins help release energy from carbohydrates.

Potatoes are a good source of B group vitamins.

Name **three** other different foods which provide a good source of B group vitamins.

1

2

3

[3]

(f) It is important to store, prepare and cook potatoes correctly to preserve their vitamin B content.

(i) Suggest the correct way to store potatoes to minimise the loss of B group vitamins.

.....[1]

(ii) Describe how to prepare potatoes to minimise the loss of B group vitamins.

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

(iii) Describe how to cook potatoes to minimise the loss of B group vitamins.

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

(g) State **three** health problems caused by a deficiency of vitamin B₂ (riboflavin).

1

2

3 [3]

[Total: 22]

Section B

Answer **all** questions.

5 A student made a salad for a vegetarian using the following ingredients:

- 100g cooked white rice
- 2 spring onions
- 1 stick of celery
- 50g sweetcorn
- 45 ml olive oil
- 15 ml white vinegar

The student sets up a sensory test to evaluate the salad.

(a) State the reasons for the following procedures which are carried out during sensory testing:

- (i) an individual table is provided for each tester
.....[1]
- (ii) the testing area is quiet
.....[1]
- (iii) clean dishes and utensils are provided
.....[1]
- (iv) water is provided
.....[1]
- (v) identical amounts of product are provided
.....[1]
- (vi) clear instructions for completing the evaluation charts are provided.
.....[1]

(b) Name **two** herbs which could be added to the salad to improve its flavour.

- 1
- 2
[2]

(c) Pulses, such as red kidney beans, can be used to add more colour to the salad.

Suggest **four** ingredients, other than pulses, which could be added to the salad to improve the colour.

- 1
- 2
- 3
- 4 [4]

(d) List **three** different pulses, other than red kidney beans, which could be used in the salad.

- 1
- 2
- 3 [3]

(e) Cooking instructions for dried red kidney beans state that they must be boiled for 15 minutes.

Explain the reason for this instruction.

-
- [1]

(f) Many people use a pressure cooker when cooking red kidney beans.

Give **four** reasons why a pressure cooker is a useful piece of equipment.

- 1
- 2
- 3
- 4 [4]

(g) Give **four** reasons why many families choose to buy ready-to-eat salads.

1

.....

2

.....

3

.....

4

.....

[4]

(h) Explain the difference between the *use-by* date and *best-before* date on a food label from a ready-to-eat salad.

.....

.....

.....

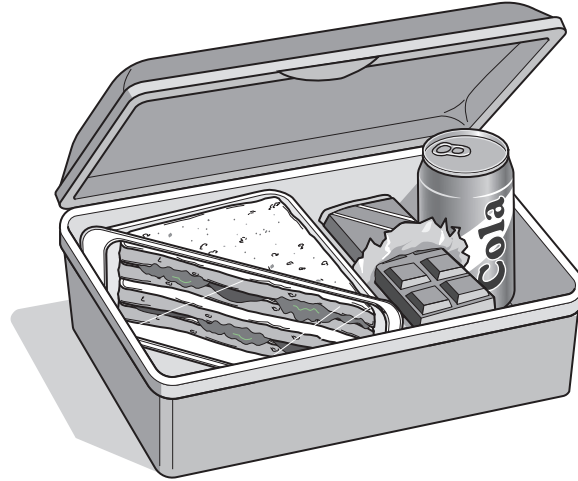
.....

[2]

[Total: 26]

6 A packed lunch for an office worker contains the following items:

- a pre-packed bacon, egg and mayonnaise sandwich
- a chocolate bar
- a can of fizzy drink



(a) One way of reducing the fat content in the sandwich is to reduce the amount of filling in the sandwich.

Suggest **four** other ways that the sandwich could be adapted to reduce the fat content.

- 1
- 2
- 3
- 4

[4]

(b) Explain why a person with coeliac disease should **not** eat this sandwich.

-
-
-
-

[2]

(c) The chocolate bar and can of fizzy drink are high in sugar which can cause tooth decay.

Describe how sugar can cause tooth decay.

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

(d) Name the mineral which can be added to the water supply to strengthen tooth enamel.

.....[1]

(e) The ingredient list on the pre-packed sandwich label includes the emulsifier lecithin.

Explain the function of an emulsifier.

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

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.