



# Cambridge IGCSE™

CANDIDATE  
NAME

CENTRE  
NUMBER

--	--	--	--	--

CANDIDATE  
NUMBER

--	--	--	--



## FOOD & NUTRITION

0648/13

Paper 1 Theory

October/November 2021

2 hours

You must answer on the question paper.

No additional materials are needed.

### INSTRUCTIONS

- Section A: answer **all** questions.
- Section B: answer **all** questions.
- Section C: answer **one** question.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.

### INFORMATION

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.

## Section A

Answer **all** questions.

You are advised to spend no longer than 45 minutes on Section A.

1 Malnutrition occurs when there is an insufficient or excessive intake of nutrients.

(a) Name **one** disease that may occur when there is an insufficient intake of:

(i) protein ..... [1]

(ii) vitamin B<sub>3</sub> ..... [1]

(iii) vitamin A. .... [1]

(b) Name **one** effect on health that may occur when there is an excessive intake of:

(i) sodium chloride ..... [1]

(ii) saturated fat. .... [1]

[Total: 5]

2 (a) One function of carbohydrate is to act as a protein sparer.

State **one** other function of carbohydrate in the body.

..... [1]

(b) Name **two** monosaccharides.

1 .....

2 .....

[2]

(c) Eating too much sugar increases the risk of tooth decay.

Suggest **six** ways to reduce the intake of sugar to help prevent tooth decay.

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

[6]

[Total: 9]

3 Digestion begins in the mouth.

(a) Name the digestive juice produced in the mouth.

..... [1]

(b) Name the enzyme present in this digestive juice.

..... [1]

(c) Name the substance that the enzyme in (b) acts upon.

..... [1]

(d) Name the substance produced as a result of the action of the enzyme in (b).

..... [1]

[Total: 4]

4 Saturated fats have single carbon–carbon bonds. Monounsaturated fats also have one double carbon–carbon bond.

(a) Describe **three** other differences between saturated fat and monounsaturated fat.

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

(b) Name **three** different foods that are examples of saturated fat.

1 .....  
2 .....  
3 ..... [3]

(c) Name **three** different foods that are examples of monounsaturated fat.

1 .....  
2 .....  
3 ..... [3]

[Total: 9]

5 (a) Explain why a person with anaemia would need a good supply of vitamin C in their diet.

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

(b) Explain how to store green vegetables in order to retain their vitamin C content.

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

(c) The deficiency disease caused by a lack of vitamin C is scurvy.

State **four** effects of scurvy on the body.

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

[Total: 10]

6 Coeliac disease damages the lining of the small intestine.

Name **three** different flours that could be used in recipes for a person with coeliac disease.

1 .....  
2 .....  
3 ..... [3]



(e) Name **two** chemical reactions that cause bread to change colour during baking.

- 1 .....
- 2 ..... [2]

(f) Suggest **six** reasons why a packet bread mix can be useful.

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

[Total: 19]

8 Food irradiation is a safe method of preservation that exposes food to ionising radiation.

Give **four** benefits of irradiating food.

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

9 Ventilation makes working in the kitchen more pleasant by removing excess heat and steam.

Identify and describe **four** different ways to ventilate a kitchen.

1 .....

.....

2 .....

.....

3 .....

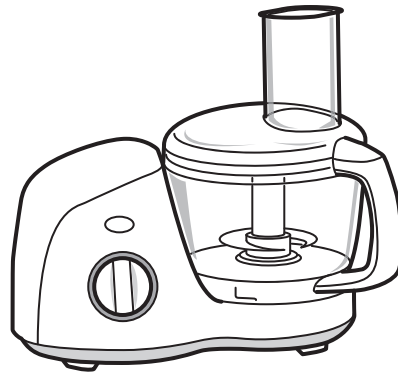
.....

4 .....

.....

[8]

10 A food processor is a versatile piece of kitchen equipment which can save time and effort in the preparation of dishes.



(a) State and explain **five** factors to consider when buying a new food processor.

- 1 .....
  - 2 .....
  - 3 .....
  - 4 .....
  - 5 .....
- [10]

(b) Although a food processor is a useful piece of equipment it can have disadvantages.

State **four** disadvantages of using a food processor.

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

[Total: 14]





A series of horizontal dotted lines for writing, spanning the width of the page.

A series of horizontal dotted lines for writing, spanning the width of the page.

**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 Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cambridgeinternational.org](http://www.cambridgeinternational.org) after the live examination series.

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