



**Cambridge Assessment International Education**  
Cambridge International General Certificate of Secondary Education

CANDIDATE  
NAME

--

CENTRE  
NUMBER

--	--	--	--	--

CANDIDATE  
NUMBER

--	--	--	--



**FOOD AND NUTRITION**

**0648/13**

Paper 1 Theory

**May/June 2019**

**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) Define the term *undernutrition*.

.....[1]

(b) Name **one** disease which is caused by protein–energy undernutrition.

.....[1]

[Total: 2]

2 (a) Complete the following sentences about protein.

(i) Protein is the only nutrient which contains the elements .....

and ..... [2]

(ii) Proteins are made up of ..... molecules. [1]

(iii) Two enzymes which break down proteins are ..... and ..... [2]

(iv) Absorption of protein takes place in the ..... [1]

(b) Different protein foods ‘complement’ each other.

(i) Explain the term *protein complementation*.

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

(ii) Explain the benefit of protein complementation.

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

(iii) Give **four** examples of protein complementation to illustrate your answer in (ii).

1 .....

2 .....

3 .....

4 .....

[4]

[Total: 12]

3 (a) Describe the composition of polysaccharides.

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

(b) Starch is a polysaccharide.

Give **four** different dietary sources of starch.

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

(c) Describe **three** effects of moist heat on starch.

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

(d) Describe **four** ways in which non-starch polysaccharide (NSP) / dietary fibre is used by the body.

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

(e) Give **four** health problems which may be caused by an excess of NSP in the diet.

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

(f) Describe the digestion of cooked starch in the mouth.

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

[Total: 18]

4 Current dietary advice is to drink plenty of water.

(a) Explain what is meant by the term *water balance*.

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

(b) State **three** effects of an inadequate intake of water.

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

(c) Suggest **four** groups of people who have an increased need for water. Give a reason for each group's need.

group 1 .....  
reason .....  
group 2 .....  
reason .....  
group 3 .....  
reason .....  
group 4 .....  
reason ..... [4]

[Total: 8]

**Section B**

Answer **all** questions.

5 A basic recipe for making 12 ginger biscuits uses:

- 100 g plain flour
- 50 g margarine
- 50 g syrup
- 50 g sugar
- 1 tsp ground ginger
- $\frac{1}{2}$  tsp bicarbonate of soda

(a) These biscuits are made using the melting method.

Name **two** other methods which could be used to make biscuits.

1 .....

2 .....

[2]

(b) Complete the steps required to make these biscuits using the melting method.

1. Grease and flour baking tray

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

[5]

(c) Name the ingredient in the basic recipe that produces carbon dioxide.

..... [1]

[Total: 8]

6 There are many different types of vegetables.

(a) Complete the table to give **one** example of each of the following types of vegetables.

type of vegetable	example
root	
tuber	
fruit	
pod	
bulb	

[5]

(b) Vegetables can be bought in many forms.

Give **two** disadvantages of buying vegetables in the following forms:

(i) fresh vegetables;

disadvantage 1 .....

disadvantage 2 ..... [2]

(ii) canned vegetables.

disadvantage 1 .....

disadvantage 2 ..... [2]

(c) State **four** points to consider when buying fresh vegetables.

1 .....

2 .....

3 .....

4 ..... [4]

(d) It is important to prepare and cook green vegetables correctly.

(i) Give **three** ways to conserve nutritional value when preparing cabbage.

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

(ii) Give **three** ways to conserve nutritional value when cooking cabbage.

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

[Total: 19]

7 Many modern households own a freezer.

(a) Suggest **six** factors for a family to consider before choosing a new freezer. Give a reason for each factor.

factor 1 .....

reason .....

factor 2 .....

reason .....

factor 3 .....

reason .....

factor 4 .....

reason .....

factor 5 .....

reason .....

factor 6 .....

reason .....

[6]

(b) Frozen food must be stored at the correct temperature.

State the correct temperature for a home freezer.

.....[1]

(c) Give **two** reasons why freezing prevents food spoilage.

1 .....

2 .....

[2]



(d) Some foods are blanched before freezing.

Give **one** benefit of blanching peas before freezing.

.....[1]

(e) Give a reason for each of the following:

(i) thaw frozen chicken joints completely before cooking;

.....[1]

(ii) fast freezing of fresh fish is essential for best quality;

.....[1]

(iii) food placed in a freezer must be well wrapped;

.....[1]

(iv) do not place hot or warm foods in a freezer;

.....[1]

(v) never refreeze defrosted food.

.....[1]

(f) Explain each of the following star ratings which can be seen on the packaging of frozen food.

one star \*

.....

two stars \*\*

.....

three stars \*\*\*

.....

[3]

[Total: 18]



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

