



Cambridge IGCSE™

CANDIDATE
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FOOD & NUTRITION

0648/12

Paper 1 Theory

October/November 2022

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.

Section A

Answer **all** questions.

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

1 Oranges are citrus fruits.

(a) Name **three** other citrus fruits.

- 1
- 2
- 3 [3]

(b) Fruits are an important part of the diet as they have a high water content. State **three** different effects on the body if there is a lack of water in the diet.

- 1
- 2
- 3 [3]

(c) Fruits such as apricots are a good source of vitamin A as beta-carotene.

(i) State **three** functions of vitamin A.

- 1
- 2
- 3 [3]

(ii) Vitamin A is also found in food as retinol. Name **three** different sources of retinol.

- 1
- 2
- 3 [3]

(d) State and explain **two** reasons why including fruit in the diet can help reduce the risk of obesity.

reason 1

explanation

reason 2

explanation

[4]

[Total: 16]

2 (a) Name **three** different animal sources of vitamin B₂ (riboflavin).

1

2

3

[3]

(b) Name the deficiency disease caused by a lack of vitamin B₁ (thiamin).

..... [1]

[Total: 4]

3 (a) Iron and phosphorus are minerals that are found in eggs.

(i) State **two** functions of iron.

1

2

[2]

(ii) State **two** functions of phosphorus.

1

2

[2]

(b) Describe **two** different physical changes that happen when eggs are heated.

1

2

[2]

[Total: 6]

4 The ingredient list from a carton of tomato and red pepper soup is shown.

Ingredients:
water, tomatoes, onion, red pepper, wheat flour, tomato purée, cream, butter, basil, garlic, salt, pepper.

Explain why someone who is a coeliac should **not** eat this soup.

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

5 Keeping foods at the correct temperature can help prevent food poisoning.
State the recommended temperature for the following:

(a) refrigerator

..... [1]

(b) freezer

..... [1]

(c) core temperature for cooked food.

..... [1]

[Total: 3]

6 (a) State **two** reasons to include each of the following nutrients in the diet of a 70-year-old male:

(i) vitamin C

1

2 [2]

(ii) calcium

1

2 [2]

(iii) non-starch polysaccharide (NSP) / dietary fibre.

1

2 [2]

(b) State **one** reason to reduce each of the following in the diet of a 70-year-old male:

(i) salt

..... [1]

(ii) sugar.

..... [1]

[Total: 8]

Section B

Answer **all** questions.

- 7 The following ingredients can be used to make shortbread biscuits using the rubbing-in method.

125 g plain wholemeal flour
25 g cornflour
100 g butter
50 g caster sugar

- (a) Suggest **two** reasons why butter is used for the shortbread.

1

2 [2]

- (b) Suggest **two** reasons why plain wholemeal flour is used for the shortbread.

1

2 [2]

- (c) Suggest **one** reason why cornflour is used for the shortbread.

..... [1]

- (d) Give **four** steps for making the shortbread dough using the rubbing-in method.

1

2

3

4 [4]

- (e) Name **three** spices that could be used to flavour the shortbread.

1

2

3 [3]

(f) Suggest **two** ways the biscuits can be shaped before baking.

- 1
- 2 [2]

(g) Before baking, shortbread is traditionally decorated by piercing with a fork. Suggest **one** other reason for this process.

- [1]

(h) Suggest **two** reasons why shortbread biscuits should **not** be stored in a container with cakes.

- 1
- 2 [2]

[Total: 17]

8 State **four** guidelines to follow for the safe storage of kitchen knives.

- 1
- 2
- 3
- 4 [4]

9 State **four** guidelines to follow for the safe storage of raw chicken.

- 1
- 2
- 3
- 4 [4]

10 (a) Describe **two** ways eggs may be used to make pastry products look attractive.

- 1
- 2 [2]

(b) Name **two** different dishes that use eggs as part of a coating.

- 1
- 2 [2]

(c) State why eggs are used for binding food products.

..... [1]

(d) Name **two** dishes that use eggs for binding.

- 1
- 2 [2]

(e) Name and describe **one** test that can be used to tell if an egg is fresh.

name of test

description

.....

..... [3]

[Total: 10]

11 Pregnant women are advised **not** to eat soft cheese as it may contain listeria which could cause miscarriage.

Name **four** other types of foods that should be avoided during pregnancy.

- 1
- 2
- 3
- 4 [4]

12 The aim of preservation is to prevent food spoilage due to the growth of microorganisms.

Once a food has been preserved, it must be stored in a sealed container to prevent contamination.

Explain **three** other ways that the preservation principles used for each of the following foods prevent spoilage:

(a) frozen peas

1

2

3

[3]

(b) a jar of tomato chutney.

1

2

3

[3]

[Total: 6]

