Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

4722780908

FOOD & NUTRITION **0648/12**

Paper 1 Theory **May/June 2023**

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.

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Section A

Answer **all** questions.

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

1 State the term used to describe a diet that contains all nutrients in the correct proportion.

..... [1]

2 A high salt intake can lead to high blood pressure (hypertension).

(a) Name a mineral that helps to reduce blood pressure.

..... [1]

(b) One way to reduce salt intake is to replace salt with herbs to flavour savoury food.
Name **four** herbs that could be used to flavour a tomato-based sauce.

1 .....

2 .....

3 .....

4 .....
[4]

[Total: 5]

3 Disaccharides are sugars.

(a) Name **two** disaccharides.

1 .....

2 .....
[2]

(b) Describe **three** effects of moist heat on sugar.

1 .....

2 .....

3 .....
[3]

[Total: 5]

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4 **(a)** Name the type of fat that does **not** contain any carbon-to-carbon double bonds.

..... [1]

(b) Name **three** different foods that are a good source of the type of fat named in **(a)**.

1 .....

2 .....

3 .....
[3]

(c) During digestion, fat must be emulsified.
State the name of the substance that emulsifies fat.

..... [1]

[Total: 5]

5 **(a)** State **two** different functions of vitamin B_2 (riboflavin).

1 .....

2 .....
[2]

(b) State **three** different health problems caused by a deficiency of vitamin B_2.

1 .....

2 .....

3 .....
[3]

[Total: 5]

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6 Vitamin C is found in cabbage.

(a) Name the deficiency disease caused by a poor supply of vitamin C.

..... [1]

(b) State and explain **five** guidelines to reduce loss of vitamin C when cooking cabbage.

1 .....

.....

2 .....

.....

3 .....

.....

4 .....

.....

5 .....

.....

[10]

[Total: 11]

7 State a reason for each of the following dietary guidelines that are often given to lactating women.

(a) Drink lots of water.

reason .....

.....

..... [1]

(b) Eat no more than two portions of oily fish per week.

reason .....

.....

..... [1]

(c) Eat a diet rich in calcium.

reason .....

.....

..... [1]

(d) Eat a diet rich in iron.

reason .....

.....

..... [1]

(e) Eat a diet rich in vitamin D.

reason .....

.....

..... [1]

(f) Eat an average of an extra 300 to 400 kcal per day.

reason .....

.....

..... [1]

(g) Eat a diet that is high in fibre.

reason .....

.....

..... [1]

(h) Check labels on processed foods.

reason .....

.....

..... [1]

[Total: 8]

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Section B

Answer **all** questions.

8 The following ingredients can be used to make small cakes.

100 g self-raising flour
100 g butter
100 g caster sugar
2 eggs

(a) Name the ingredient in the small cakes that provides the most energy.

..... [1]

(b) Spices can be added to the cake mixture to vary the flavour of the small cakes.
Suggest **two** other different ways to vary the flavour of the cake mixture.

1 .....

2 .....
[2]

(c) Give instructions on how to make the cake mixture using the creaming method.

.....

.....

.....

.....

.....

.....

.....

..... [6]

(d) Name the ingredient in the mixture that causes coagulation to occur during baking.

..... [1]

(e) Name the ingredient in the mixture that causes dextrinisation to occur during baking.

..... [1]

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(f) Name **two** ingredients in the mixture that cause the Maillard reaction to occur during baking.

1 .....

2 .....
[2]

(g) Describe **two** effects of the Maillard reaction on the finished cakes.

1 .....

2 .....
[2]

(h) Name **one** method of heat transference that occurs when the cakes are baking in the oven.

..... [1]

(i) State **four** reasons why the cakes may have a close, heavy texture after baking.

1 .....

2 .....

3 .....

4 .....
[4]

(j) State **one** reason why it is important to use a wire rack to cool cakes.

..... [1]

(k) Give **two** guidelines for how the cakes should be stored to keep them in good condition.

1 .....

2 .....
[2]

[Total: 23]

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9 A person's choice of diet is often affected by religious beliefs.

Name the religion associated with each of the following:

(a) eating kosher food

..... [1]

(b) eating fish on Friday

..... [1]

(c) fasting during Ramadan.

..... [1]

[Total: 3]

10 Sushi can be made using fish, vegetables, cooked rice and seaweed.

(a) Name **one** mineral found in seaweed.

..... [1]

(b) Name **one** vitamin found in rice.

..... [1]

(c) State **two** reasons why cooked rice is considered a high-risk food for food poisoning.

1 .....

2 .....
[2]

(d) A consumer purchases sushi for consumption later the same day.
State the storage temperature needed for the sushi to prevent food poisoning.

..... [1]

(e) Name **three** shellfish that can be used to make sushi.

1 .....

2 .....

3 .....
[3]

[Total: 8]

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11 Yeast is an important ingredient when making bread.

(a) State **two** conditions required for yeast to ferment.

1 .....

2 .....
[2]

(b) Name the gas yeast produces during the process of fermentation.

..... [1]

[Total: 3]

12 Plastic can be used to package convenience food.

(a) Name **two** other different materials that can be used to package convenience food.

1 .....

2 .....
[2]

(b) State **six** reasons why plastic is a suitable material for packaging convenience food.

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....
[6]

[Total: 8]

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Section C

Answer **either** Question 13 **or** 14.

13 Fats and oils are important commodities.

- Discuss the uses of fats and oils in the preparation and cooking of family meals.
- Discuss ways to reduce saturated fat intake when preparing and cooking family meals.

[15]

OR

14 Constipation is a common health problem.

- Discuss the causes and effects of constipation.
- Discuss modifications that can be made when preparing family meals to help minimise the risk of developing constipation.

[15]

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[Turn over

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