



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER



FOOD AND NUTRITION

0648/12

Paper 1 Theory

October/November 2017

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 **11** printed pages and **1** blank page.

Section A

Answer **all** questions.

- 1 (a) Name the substance which combines with fatty acids to form a fat molecule (triglyceride).
..... [1]
- (b) State **one** physical difference between fats and oils.
..... [1]
- (c) State **one** chemical difference between saturated fats and unsaturated fats.
.....
..... [1]
- (d) (i) Name **four** different examples of saturated fats.
1 2
3 4 [2]
- (ii) Name **four** different examples of unsaturated fats.
1 2
3 4 [2]
- (e) Fats are used to provide the body with a source of energy.
State **five** different ways the body uses energy.
1
2
3
4
5 [5]
- (f) Name **one** unit used to measure the energy value of fat.
..... [1]
- (g) Describe **two** effects of heat on fat.
1
2 [2]

(h) Suggest **two** reasons why oil which has been used for frying should be strained after use.

- 1
- 2 [2]

(i) (i) Name the substance in the digestive system that emulsifies fats.

..... [1]

(ii) Name an enzyme which breaks down fats.

..... [1]

(iii) Name the part of the digestive system where digested food is absorbed.

..... [1]

(iv) Describe the location and function of the lacteal.

location

function

[2]

[Total: 22]

2 Fats are a good source of vitamins A, D, E and K.

(a) State **two** functions of vitamin A (retinol).

- 1
- 2 [2]

(b) Give **four** different food sources of vitamin D (cholecalciferol).

- 1 2
 - 3 4
- [2]

(c) State **one** function of vitamin E.

..... [1]

(d) Give **one** food source of vitamin K.

..... [1]

[Total: 6]

3 (a) Discuss the need for iron and vitamin B₉ (folic acid) during pregnancy. Give **two** examples of how each of these nutrients could be included in the diet.

iron

.....

.....

.....

example 1

example 2

vitamin B₉ (folic acid)

.....

.....

.....

example 1

example 2

[6]

(b) Suggest **three** types of food which should be avoided during pregnancy. Give reasons for your suggestions.

food 1

reason

.....

food 2

reason

.....

food 3

reason

.....

[6]

[Total: 12]

Section B

Answer **all** questions.

4 Many households use a slow cooker for cooking family meals.



(a) Give **six** advantages of using a slow cooker.

- 1
- 2
- 3
- 4
- 5
- 6

[6]

(b) Give advice on how leftovers from a slow-cooked chicken casserole can be stored and reused safely.

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[6]

5 The following ingredients can be used to make bread:

- 500g strong plain flour
- 10g salt
- 1 sachet dried yeast
- 250ml warm water

- (a) State why this recipe is **not** suitable for a coeliac.
..... [1]
- (b) Give **one** reason why the type of flour used is strong plain flour.
..... [1]
- (c) Explain the function of the salt in the recipe.
..... [1]
- (d) Explain why the temperature of the water is important.
..... [1]
- (e) Name the process by which yeast produces carbon dioxide and alcohol.
..... [1]
- (f) Give **two** reasons for kneading in bread-making.
1
2 [2]
- (g) Explain why the crust turns brown when the bread is baked.
.....
..... [2]
- (h) Give **five** rules for personal hygiene when making bread.
1
2
3
4
5 [5]

(i) Bread can be bought packaged in plastic wrapping.

Name **two** other types of packaging material and give an example of a use of each to package food.

type 1

example

type 2

example

[4]

[Total: 18]

6 Fish can be an important part of a healthy diet.

(a) List **three** points to look for when buying fresh fish.

- 1
- 2
- 3 [3]

(b) Give **two** different examples of each of the following:

(i) oily fish;

- 1 2 [2]

(ii) shellfish.

- 1 2 [2]

(c) Fish is often coated before deep frying.

Suggest **two** suitable coatings which could be used.

- 1 2 [2]

(d) State and explain **four** safety points to follow when deep frying.

- 1 [4]
- 2
- 3
- 4

(e) Suggest **two** different ways to make steamed white fish look more appetising when served as part of a main meal.

- 1
- 2 [2]

[Total: 15]

Section C

Answer **either** Question 7(a) **or** 7(b).

7 (a) Describe the functions and advantages of each of the following additives.

- (i) preservatives;
- (ii) flavourings and sweeteners;
- (iii) emulsifiers and stabilisers.

[15]

OR

(b) Describe and explain ways to prevent food poisoning when storing and preparing food. [15]

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[Total: 15]

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