



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

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FOOD AND NUTRITION

0648/12

Paper 1 Theory

May/June 2018

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 **13** printed pages and **3** blank pages.

Section A

Answer **all** questions.

1 (a) State what is meant by the term *DRV*.

.....[1]

(b) Explain the purpose of DRV.

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

[Total: 3]

2 Nutritionists may advise reducing the intake of saturated fats.

(a) Give **three** reasons for this advice.

1
2
3 [3]

(b) Complete the sentence.

The enzyme lipase breaks down fats into and
..... [2]

[Total: 5]

3 The table shows the energy and main nutrients per 100 ml in different types of cow's milk.

type of milk	energy /kJ	protein /g	fat /g	carbohydrate /g
whole	285	3.4	4.0	4.7
semi-skimmed	197	3.6	1.8	4.8
skimmed	146	3.6	0.3	4.9

(a) Suggest, with a reason, which type of milk shown in the table would be suitable for the following:

(i) a two-year-old child

type of milk

reason

[2]

(ii) a sedentary worker

type of milk

reason

[2]

(b) The types of milk shown in the table would not be suitable for a person who is lactose intolerant. Suggest a type of milk suitable for a person who is lactose intolerant. Give a reason for your suggestion.

type of milk

reason

[2]

(c) The table shows that cow's milk contains protein, fat and carbohydrate. Name **three** other nutrients found in cow's milk and give a different function for each one.

(i) nutrient

function

[2]

(ii) nutrient

function

[2]

(iii) nutrient

function

[2]

(d) Cow's milk lacks the mineral iron.

(i) Name the deficiency disease associated with a lack of iron.

.....[1]

(ii) Name **three** different animal source foods which are a good source of iron.

1

2

3

[3]

(e) Explain why milk is heat treated before it is sold.

.....

.....[2]

(f) Name the type of milk produced by each of the following milk treatment processes.

(i) The milk is heated to 72 °C for 15 seconds and then cooled to not more than 10 °C.

.....[1]

(ii) Milk is sealed in bottles and heated above 100 °C for 20–30 minutes.

.....[1]

(g) Name **four** different milk products.

1

2

3

4

[4]

(h) (i) Explain the process which occurs when milk boils over when heated.

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

(ii) Give advice, with reasons, for the storage of fresh milk in the home.

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

[Total: 32]

Section B

Answer **all** questions.

4 The following ingredients can be used to make a basic vegetable soup:

- 1 diced onion
- 1 diced carrot
- 1 diced courgette
- 1 sliced stick of celery
- 1 diced potato
- 25 g butter
- 500 ml vegetable stock

(a) Name **two** other root vegetables which could be used for making soup.

1

2

[2]

(b) The vegetables were prepared an hour before the soup was made. The potatoes have turned brown.

(i) Name this type of browning.

.....[1]

(ii) Suggest **three** ways to prevent this type of browning occurring when preparing potatoes.

1

.....

2

.....

3

.....

[3]

- (c) Some people prefer to use ready-prepared vegetables.
Give **three** advantages and **three** disadvantages of using ready-prepared vegetables.

advantage 1

.....

advantage 2

.....

advantage 3

.....

disadvantage 1

.....

disadvantage 2

.....

disadvantage 3

.....

[6]

- (d) Suggest **four** different ingredients which could add low biological value (LBV) protein to soup.

1

2

3

4

[4]

- (e) State **two** functions of each of the following types of additives which are used in canned soup.

- (i) preservatives

function 1

function 2

[2]

- (ii) flavourings

function 1

function 2

[2]

- (f) A blender can be used to purée soup to a smooth consistency. State and explain **six** factors to consider when choosing a new blender.



1

2

3

4

5

6

[6]

(g) State **four** safety precautions to follow when using electrical kitchen equipment.

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

[Total: 30]

5 When following recipes it is important to use the correct proportions of ingredients. State how the changes to the proportions of ingredients in the following dishes would affect the finished results.

(a) State **four** effects of increasing the proportion of sugar in a cake made by the creaming method.

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

(b) State **three** effects of increasing the proportion of fat in shortcrust pastry.

- 1
 - 2
 - 3
- [3]

(c) State **two** effects of increasing the proportion of bicarbonate of soda to cream of tartar in scones.

- 1
 - 2
- [2]

[Total: 9]

[Turn over

6 Flour is an important ingredient when making bread, cakes and pastries.
State **three** differences between the following types of flour:

(a) strong and soft flour

- 1
-
- 2
-
- 3
-

[3]

(b) white and wholemeal flour

- 1
-
- 2
-
- 3
-

[3]

[Total: 6]

Section C

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

- 7 (a) Type 2 diabetes is closely associated with obesity and being overweight.
Discuss dietary advice which can help manage type 2 diabetes and reduce obesity. [15]

OR

- (b) Many people choose to follow a vegetarian diet.
Identify and discuss the benefits of a vegetarian diet. Explain, giving examples, how lacto-vegetarians can obtain sufficient protein and iron in their diet. [15]

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