



# Cambridge IGCSE™

CANDIDATE  
NAME

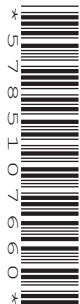
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CENTRE  
NUMBER

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## FOOD & NUTRITION

0648/12

Paper 1 Theory

May/June 2021

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. Any blank pages are indicated.

**Section A**

Answer **all** questions.

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

- 1 (a) Energy balance is taking in the right amount of energy to meet the needs of the body.

State **three** effects in the body of taking in too much energy.

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

- (b) Explain **two** ways in which each of the following factors affect an individual's need for energy:

- (i) age

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

- (ii) gender.

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

[Total: 7]

- 2 (a) State **three** characteristics of an unsaturated fat.

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

- (b) Name **three** different foods that are a good source of polyunsaturated fat.

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

[Total: 6]

3 (a) Name **three** vitamins that have antioxidant functions.

1 .....

2 .....

3 .....

[3]

(b) (i) Name **three** different animal food sources of vitamin B<sub>1</sub> (thiamin).

1 .....

2 .....

3 .....

[3]

(ii) Name the disease that may occur when there is an insufficient intake of vitamin B<sub>1</sub>.

..... [1]

[Total: 7]

4 (a) State **two** functions of iodide in the body.

1 .....

2 .....

[2]

(b) Give **one** symptom of the deficiency disease associated with a lack of iodide.

..... [1]

(c) Name **three** different sources of iodide.

1 .....

2 .....

3 .....

[3]

[Total: 6]

5 State the location and role of the villi in the digestive system.

location .....

role ..... [2]

6 It is important that a convalescent has a good supply of nutrients.

- (a) Suggest **one** reason why each of the following may be needed in the diet of a convalescent:
- (i) iron ..... [1]
  - (ii) vitamin C ..... [1]
  - (iii) protein ..... [1]
  - (iv) water ..... [1]
  - (v) calcium ..... [1]
  - (vi) vitamin D. .... [1]

(b) Explain why the following meal would not be suitable for a convalescent.

creamy chicken curry and rice  
jam doughnut

.....

.....

.....

.....

.....

..... [6]

[Total: 12]

**Section B**

Answer **all** questions.

7 A vegetarian lasagne contains the following vegetables:

- 1 carrot
- 1 courgette
- 1 onion
- 1 small tin of tomatoes
- 100 g spinach
- 2 cloves of garlic
- 2 sticks of celery

(a) Name **two** other root-type vegetables that could be used in the lasagne.

1 .....

2 ..... [2]

(b) Name **two** other fruit-type vegetables that could be used in the lasagne.

1 .....

2 ..... [2]

(c) Identify and explain **six** different nutritional reasons for increasing the amount of vegetables in the diet.

reason 1 .....

explanation .....

reason 2 .....

explanation .....

reason 3 .....

explanation .....

reason 4 .....

explanation .....

reason 5 .....

explanation .....

reason 6 .....

explanation ..... [12]

[Total: 16]

8 The following ingredients can be used to make a white sauce:

- 25 g butter
- 25 g plain white flour
- 250 ml full fat milk

- (a) Name **one** method that can be used to make the sauce.  
..... [1]
- (b) Identify **one** ingredient that thickens the sauce.  
..... [1]
- (c) Name the thickening process that happens as the sauce cooks.  
..... [1]
- (d) Identify **one** ingredient that makes the sauce glossy.  
..... [1]
- (e) (i) Identify **one** ingredient in the sauce that is unsuitable for a vegan.  
..... [1]
- (ii) Suggest an alternative ingredient that could be used to replace the ingredient in (e)(i).  
..... [1]
- (f) Give **two** reasons why there may be lumps in the finished sauce.  
1 .....  
2 ..... [2]
- (g) Give **three** reasons why the sauce may be thin and runny.  
1 .....  
2 .....  
3 ..... [3]

[Total: 11]

9 Fire safety is very important in the kitchen.

(a) List **two** items of fire safety equipment that would be useful in the kitchen.

1 .....

2 .....

[2]

(b) Describe how to safely manage a fire in a pan of oil.

.....

..... [2]

(c) Describe the first aid treatment for a minor burn caused by hot oil.

.....

..... [2]

[Total: 6]

10 (a) Identify **six** factors to consider when choosing a new electric cooker.

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

[6]

(b) Suggest **six** ways of reducing energy costs when cooking on the hob.

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

[6]

[Total: 12]





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[Total: 15]



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