

## **Cambridge Assessment International Education**

Cambridge International General Certificate of Secondary Education

| CANDIDATE<br>NAME |  |  |                     |  |  |
|-------------------|--|--|---------------------|--|--|
| CENTRE<br>NUMBER  |  |  | CANDIDATE<br>NUMBER |  |  |

#### **FOOD AND NUTRITION**

0648/13

Paper 1 Theory

October/November 2019

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 10(a) or 10(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.

# **Section A**

# Answer all questions.

| 1 | (a) | Define the term <i>overnutrition</i> .  | [1]       |
|---|-----|---|-----------|
|   | (b) | Suggest one common result of overnutrition.   | [1]       |
|   |     |   | [1]       |
|   |     | Γ   | Total: 2] |
| 2 | (a) | Proteins can prevent extreme conditions such as kwashiorkor.                        |           |
|   |     | Give <b>four</b> other functions of proteins in the body.                           |           |
|   |     | 1   |           |
|   |     | 2   |           |
|   |     | 3   |           |
|   |     | 4   | [4]       |
|   | (b) | Proteins are made up of amino acid molecules.                                       |           |
|   |     | Explain why some proteins have a lower biological value (LBV) than others.          |           |
|   |     |   |           |
|   |     |   |           |
|   |     |   |           |
|   | (c) | Name three different foods which are a good source of low biological value protein. |           |
|   |     | 1   |           |
|   |     | 2   |           |
|   |     | 3   | [3]       |

|   | (d) | Name <b>two</b> enzymes which break down protein in the digestive system.  |        |
|---|-----|--|--------|
|   |     | 1  |        |
|   |     | 2  |        |
|   |     |  | [2]    |
|   |     | [Tota  | l: 11] |
| 3 | Mor | nosaccharides are used as a source of energy in the body.  |        |
|   | (a) | Define the term <i>monosaccharide</i> .  |        |
|   |     |  | [1]    |
|   | (b) | Galactose is an example of a monosaccharide.   |        |
|   |     | Name two other monosaccharides.  |        |
|   |     | 1  |        |
|   |     | 2  |        |
|   |     |  | [2]    |
|   |     | [Tot   | al: 3] |
| 4 | B g | roup vitamins play an important part in the production of energy.  |        |
|   | Cor | mplete the following sentences about B group vitamins:   |        |
|   | (a) | Vitamin B <sub>1</sub> is also known as  | [1]    |
|   | (b) | A deficiency of vitamin B <sub>1</sub> can lead to the disease   | [1]    |
|   | (c) | Vitamin B <sub>2</sub> is also known as riboflavin. <b>Three</b> good sources of riboflavin are yeast extraction | et,    |
|   |     | and  | [2]    |
|   | (d) | Vitamin B <sub>3</sub> is also known as  | [1]    |
|   | (e) | <b>Two</b> effects on health of a prolonged deficiency of Vitamin B <sub>3</sub> are                             |        |
|   |     | and  | [2]    |
|   |     | [Tot   | al: 7] |

| 5 | Boo  | ly size is one factor which can affect the energy needs of a person.             |            |
|---|------|--|------------|
|   | Give | e five other factors which affect the energy needs of a person.                  |            |
|   | 1    |  |            |
|   | 2    |  |            |
|   | 3    |  |            |
|   | 4    |  |            |
|   | 5    |  | [5]        |
| 6 | lder | ntify a different vitamin or mineral needed for each of the following functions: |            |
|   | (a)  | formation of blood cells;  |            |
|   |      |  | [1]        |
|   | (b)  | production of visual purple;   |            |
|   |      |  | [1]        |
|   | (c)  | helping wounds heal;   |            |
|   |      |  | [1]        |
|   | (d)  | aiding the absorption of calcium;  |            |
|   |      |  | [1]        |
|   | (e)  | production of the hormone thyroxine;   |            |
|   |      |  | [1]        |
|   | (f)  | preventing megaloblastic anaemia.  |            |
|   |      |  | [1]        |
|   |      |  | [Total: 6] |

| Most absorption of digested food takes place in the lieum. |
|--|
| Describe the structure of the ileum.                       |
|  |
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# Section B

# Answer all questions.

| 8 | Cur | Current dietary advice is to include fresh fruit in the diet each day. |  |         |  |  |  |
|---|-----|--|--|---------|--|--|--|
|   | (a) | Ider   | ntify and explain <b>five</b> nutritional reasons for this advice.                     |         |  |  |  |
|   |     | 1  |  |         |  |  |  |
|   |     |  |  |         |  |  |  |
|   |     | 2  |  |         |  |  |  |
|   |     |  |  |         |  |  |  |
|   |     | 3  |  |         |  |  |  |
|   |     |  |  |         |  |  |  |
|   |     | 4  |  |         |  |  |  |
|   |     |  |  |         |  |  |  |
|   |     | 5  |  |         |  |  |  |
|   |     |  |  | <br>[5] |  |  |  |
|   | (b) | Frui   | it can be preserved by making jam.   |         |  |  |  |
|   |     | Ехр  | plain how each of the following steps helps to prevent fruit spoiling when making jam: |         |  |  |  |
|   |     | (i)  | boiling fruit;   |         |  |  |  |
|   |     |  |  | [1]     |  |  |  |
|   |     | (ii)   | adding sugar;  |         |  |  |  |
|   |     |  |  | [1]     |  |  |  |
|   |     | (iii)  | sealing jars.  |         |  |  |  |

.....[1]

(c) Complete the table to show different ways fruit can be included in family meals.

|                   |      | use of fruit                                | example      |
|-------------------|------|---|--------------|
|                   |      | hot dessert                                 | apple pie    |
|                   |      |   |              |
|                   |      |   |              |
|                   |      |   |              |
|                   |      |   |              |
|                   |      |   | [5]          |
| ( <del>.</del> 1\ | Civ  | a thuan nainta ta canaidar when abac        |              |
| (u)               |      | e <b>three</b> points to consider when choo |              |
|                   | 1    |   |              |
|                   | 2    |   |              |
|                   | 3    |   | [3]          |
| (0)               | Ermi | it oon he hought in verious forms           | [0]          |
| (e)               |      | it can be bought in various forms.          |              |
|                   | (i)  | Give three advantages of using drie         |              |
|                   |      | advantage 1                                 |              |
|                   |      |   |              |
|                   |      | advantage 2                                 |              |
|                   |      |   |              |
|                   |      | advantage 3                                 |              |
|                   |      |   |              |
|                   |      |   | [3]          |
|                   | (ii) | Give three disadvantages of using f         | rozen fruit. |
|                   |      | disadvantage 1                              |              |
|                   |      |   |              |
|                   |      | disadvantage 2                              |              |
|                   |      |   |              |
|                   |      |   |              |

disadvantage 3 .....

[3]

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|                         |  |
|                         |  |
| <br>A basic             | [Total c recipe for a chicken pie uses the following ingredients:  |
| <br>A basic             | [Total c recipe for a chicken pie uses the following ingredients:  Shortcrust pastry   |
| A basic                 | [Total crecipe for a chicken pie uses the following ingredients:   |
| A basic                 | Total c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry** 200 g plain flour 50 g butter 50 g white vegetable fat   |
| A basic                 | [Total c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry** 200 g plain flour 50 g butter   |
| A basic                 | Total c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry** 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  **filling**  |
| A basic                 | c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry* 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  |
|                         | c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry* 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  **filling* 200 g cooked chicken breast*   |
| <b>(a)</b> Gi           | c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry* 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  *filling 200 g cooked chicken breast 100 ml white sauce   |
| <b>(a)</b> Gi           | c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry** 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  **filling** 200 g cooked chicken breast 100 ml white sauce  ive four steps for making the shortcrust pastry. |
| <b>(a)</b> Gi<br>1<br>2 | c recipe for a chicken pie uses the following ingredients:  **shortcrust pastry* 200 g plain flour 50 g butter 50 g white vegetable fat pinch of salt 100 ml cold water  **filling* 200 g cooked chicken breast 100 ml white sauce  ive four steps for making the shortcrust pastry.   |

| (b)        | Give <b>one</b> reason why the pastry should be left in the fridge after making.  [1]                |                      |  |  |  |  |  |
|------------|--|----------------------|--|--|--|--|--|
| (c)        |  |                      |  |  |  |  |  |
|            | 2  |                      |  |  |  |  |  |
| (d)        |  | [2]                  |  |  |  |  |  |
|            | 2  |                      |  |  |  |  |  |
|            | 3  |                      |  |  |  |  |  |
|            | 4  | [4]                  |  |  |  |  |  |
| (e)        | Different types of vegetables can be added to the  | e pie filling.       |  |  |  |  |  |
|            | (i) Name one suitable root vegetable to add to   | the pie filling.     |  |  |  |  |  |
|            |  | [1]                  |  |  |  |  |  |
|            | (ii) Name one suitable bulb vegetable to add to  | o the pie filling.   |  |  |  |  |  |
|            |  | [1]                  |  |  |  |  |  |
| (f)        | Name the ingredient in the chicken pie which ca  | uses dextrinisation. |  |  |  |  |  |
| <i>(</i> ) |  | [1]                  |  |  |  |  |  |
| (g)        | Complete the table to show two other changes which would make the chicken pie suitable f<br>a vegan. |                      |  |  |  |  |  |
|            | change   | replacement          |  |  |  |  |  |
|            | butter   | vegetable margarine  |  |  |  |  |  |
|            |  |                      |  |  |  |  |  |
|            |  |                      |  |  |  |  |  |

[4]

[Total: 18]

# **Section C**

Answer either Question 10(a) or 10(b).

|    | (a) | Discuss ways to be economical when shopping for food and cooking family meals. [15]          |
|----|-----|--|
| OR |     |  |
|    | (b) | Many processed foods use additives. Explain the benefits of each of the following additives: |
|    |     | • emulsifiers;   |
|    |     | • flavourings;   |
|    |     | • preservatives.   |
|    |     | [15]   |
|    |     |  |
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