

Centre Number	Candidate Number

Candidate Name \_\_\_\_\_

**International General Certificate of Secondary Education  
CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**FOOD SCIENCE  
PAPER 1**

**0635/1**

**MAY/JUNE SESSION 2002**

2 hours

Additional materials:  
Answer paper

**TIME** 2 hours

**INSTRUCTIONS TO CANDIDATES**

Write your name, Centre number and candidate number in the spaces at the top of this page and on any separate answer paper used.

**Section A**

Answer **all** questions.

Write your answers in the spaces provided on the question paper.

**Section B**

Answer any **two** questions.

Write your answers in the spaces provided on the question paper.

**Section C**

Answer **one** question.

Where lined pages are provided at the end of the question paper, write your answer on these and continue on separate answer paper if necessary.

At the end of the examination, fasten the separate answer paper used securely to the question paper.

**INFORMATION FOR CANDIDATES**

The number of marks is given in brackets [ ] at the end of each question or part question.

FOR EXAMINER'S USE	
Section A	
Section B	
Section B	
Section C	
TOTAL	

**This question paper consists of 13 printed pages, 2 lined pages and 1 blank page.**

**BLANK PAGE**

**Section A**

Answer **all** questions in the spaces provided.

**1** There is a wide variety of cheese available.

**(a)** Name **two** cheeses and in each case state the country of origin.

Cheese .....

Country of origin .....

Cheese .....

Country of origin ..... [4]

**(b)** State **two** rules to follow when using cheese in cooked dishes.

.....

..... [2]

**(c) (i)** Name **one** group of people who should reduce the amount of cheese in their diet.

.....

**(ii)** Explain your answer.

.....

..... [2]

(d) State **four** enzymes which are involved in the breakdown of cheese in the digestive system. For each named enzyme state the part of the digestive system in which it is active and the breakdown product.

Enzyme 1 .....

Found in .....

Produces .....

Enzyme 2 .....

Found in .....

Produces .....

Enzyme 3 .....

Found in .....

Produces .....

Enzyme 4 .....

Found in .....

Produces ..... [12]

2 (a) List **three** uses of water in the body.

.....  
.....  
..... [3]

(b) What does the term 'water balance' mean?

..... [1]

(c) State **three** situations when a person may be deficient in water.

.....  
.....  
..... [3]

(d) Name the condition which means that a person is lacking in water.

..... [1]

3 Name **one** nutrient which is involved in the:

- (a) formation of enzymes and hormones; .....
- (b) absorption of calcium; .....
- (c) production of visual purple; .....
- (d) prevention of scurvy. .... [4]

4 (a) Why are preserved foods useful in the home?

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

(b) Give **one** example of preserving by:

- (i) the use of high temperature; .....
- (ii) the use of very low temperatures; .....
- (iii) the use of an acid; .....
- (iv) the use of a chemical. .... [4]

(c) State **two** advantages of importing food from other countries.

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

**Section B**

Answer **two** questions.

5 (a) (i) Name the **three** elements which make up fats and oils.

.....

(ii) Name **three** animal fats.

.....

[3]

(b) (i) State the difference between the structure of saturated fat and polyunsaturated fat.

.....

..... [2]

(ii) Name **two** sources of polyunsaturated fat.

..... [1]

(iii) Explain why it is recommended that a person's intake of saturated fat should be reduced.

.....

.....

..... [2]

(iv) Suggest **four** ways of reducing saturated fat in the diet.

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..... [2]

(c) Frying is a popular method of cooking.

(i) Give **two** reasons for this.

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

(ii) Explain why it is necessary to coat food before deep frying.

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.....  
..... [3]

(iii) What would be the result if the temperature of the fat for deep frying was:

(a) too hot;

.....  
.....

(b) not hot enough?

..... [2]

(d) State and explain **three** safety rules to follow when deep frying.

.....  
.....  
..... [3]

6 (a) (i) Name **three** gases used as raising agents.

..... [3]

(ii) Explain why raising agents are important in mixtures.

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

(b) Name the gas which raises each of the following mixtures and describe how it is produced.

(i) Swiss Roll;

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.....  
.....

(ii) a loaf of bread;

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.....  
.....

(iii) gingerbread;

.....  
.....  
.....

(iv) flaky pastry;

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.....

(v) a Victoria sandwich cake made with self-raising flour.

.....  
.....  
.....

[10]



(c) Give instructions, with reasons, for storing and using baking powder.

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..... [5]

7 Foods do not keep indefinitely.

(a) State **two** reasons why it may be helpful to slow down or prevent the deterioration of food.

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

(b) Give the cause of the following terms which are used to describe different types of food spoilage.

(i) fermentation;

.....

(ii) rancidity;

.....

(iii) shrivelling;

.....

(iv) souring.

.....

[4]

(c) Some bacteria cause illness.

(i) Name **three** bacteria which cause food poisoning.

.....  
..... [3]

(ii) State, with reasons, **two** foods at risk from bacterial contamination.

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

(iii) State the conditions which favour the multiplication of bacteria.

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

(iv) State the effect on bacteria of:

(a) very high temperatures;

.....

(b) very low temperatures.

..... [2]

(v) Explain **five** rules which should be followed in the kitchen to reduce the risk of food contamination.

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..... [5]

8 The ingredients list below comes from a can of tomato soup.

Water, Tomato puree, Tomato, Onion, Sugar, Modified starch, Vegetable oil, Lemon juice, Vegetable bouillon. Salt, Garlic, Herbs, Black pepper, Spices.

(a) Explain the significance of the order of ingredients.

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

(b) (i) What is the function of 'modified starch'?

.....

(ii) What is 'Vegetable bouillon'?

.....  
.....

(iii) Name **two** herbs which could be included in this soup.

..... [3]

(c) Identify and give reasons for **five** other pieces of information which must be shown on a label.

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.....  
.....  
.....  
..... [5]

(d) Nutritional information is often given on a label. Name **two** groups of people for whom this would be useful, giving reasons in each case.

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



**Section C**

Answer **one** question from this section.

- 9** Discuss the nutritional importance of milk. Give instructions for the safe storage of fresh milk and describe how milk can be processed to extend its shelf-life. [20]
- 10** Discuss, with reasons and examples, factors which need to be considered when choosing, preparing and serving meals for children aged between two and five years. [20]
- 11** Identify and discuss the importance of the main mineral elements needed by the body. Suggest how each might be provided in family meals. [20]



