

Centre Number	Candidate Number

Candidate Name _____

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

FOOD SCIENCE

0635/1

PAPER 1

OCTOBER/NOVEMBER 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 any 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 14 printed pages, 1 lined page and 1 blank page.



Section A

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

1 Most countries have festivals when traditional dishes are served.

Name **two** festivals and **one** dish associated with each festival.

Festival	Dish

[2]

2 (a) Identify **two** factors which can affect local food production.

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

(b) State **two** advantages of home-grown vegetables.

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

3 (a) State **two** ways of saving fuel when cooking on the top of the stove;

.....
.....

(b) and two ways of saving fuel when cooking in the oven.

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

4 Suggest how the following might be provided when serving steamed fish in a main meal:

- (a) colour;
- (b) flavour;
- (c) texture. [3]

5 (a) Study the examples of carbohydrates named below:

Pectin; Starch; Glucose; Maltose; Sucrose; Galactose; Fructose; Lactose; Cellulose.

(i) Identify the carbohydrates which fit into the following groups:

(a) Monosaccharides (simple sugars);

.....

(b) Disaccharides (double sugars).

.....

(ii) (a) Name the **two** carbohydrates which can be described as 'unavailable'.

.....

(b) Explain why they are described as 'unavailable'.

.....

.....

[5]

(b) (i) Identify **two** areas of the digestive tract where starch is digested.

.....

(ii) State how starch is broken down into glucose.

.....

.....

.....

[4]

6 Explain why:

(a) raw and cooked meat should be stored separately;

.....

.....

(b) white flour has a longer shelf-life than whole-wheat or brown flour.

.....

.....

[4]

7 State, with reasons, **one** way in which you would store:

(a) biscuits;

Storage

Reason

.....

(b) milk.

Storage

Reason

.....

[4]

8 Successful cake and pastry making depends on using an accurate list of ingredients, following the recommended method and baking at the correct temperature.

(a) (i) Give quantities to complete the following list of ingredients.

Shortcrust pastry

Victoria sandwich cake

Swiss Roll

250g (8 oz.) flour

3 eggs

2 eggs

..... fat

..... flour

..... sugar

..... water

..... sugar

..... flour

..... fat

(ii) Complete the following table to indicate the types of ingredients needed for these mixtures.

Basic mixture	Type of flour	Type of fat	Type of sugar
Shortcrust pastry			
Victoria sandwich cake			
Swiss roll			

[7]

(b) Give the temperature at which each mixture should be baked.

(i) Shortcrust pastry

(ii) Victoria sandwich cake

(iii) Swiss roll

[3]

Section B

Answer **two** questions.

9 It is important that each individual receives an adequate amount of protein in their diet.

(a) Name:

(i) the **four** main chemical elements which make up protein;

.....

(ii) the smallest unit of protein which can be absorbed.

.....

[3]

(b) Foods containing protein are classified according to their biological value.

(i) Explain the difference between High Biological Value (HBV) protein and Low Biological Value (LBV) protein.

.....

.....

.....

(ii) Give **two** examples of:

(a) HBV protein foods;

.....

(b) LBV protein foods.

.....

[4]

(c) (i) State **three** functions of protein in the body.

.....

.....

.....

(ii) List **four** factors which affect the daily protein needs of different individuals.

.....

.....

.....

.....

[7]

10 Eggs are very useful in cooking.

(a) (i) Explain how eggs should be stored to maintain freshness.

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

(ii) Describe the appearance of a fresh egg which has been broken onto a plate.

.....
.....

[4]

(b) (i) Name **two** main dishes made from eggs.

.....

(ii) State why eggs are important ingredients for main dishes.

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

[4]

(c) For each of the following give an example of **when** and **how** eggs are used, and a **scientific explanation** of the changes which take place.

(i) Eggs as a glaze;

.....

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.....

.....

.....

(ii) Eggs as a coating;

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.....

(iii) Eggs as raising agents;

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(iv) Eggs as emulsifiers.

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.....

[12]

11 Refrigerators and deep freezers are popular appliances but they are often used incorrectly.

(a) (i) State **two** factors which would affect your choice of refrigerator.

.....
.....

(ii) Suggest **two** reasons why it might be useful for a family to own a deep freezer.

.....
.....

[4]

(b) (i) Describe the effect on bacteria of temperatures of:

(a) 4°C to 5°C in a refrigerator cabinet;

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

(b) -18°C in a deep freeze.

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

(ii) Explain the importance of freezing food at -25°C or below.

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

[4]

(c) (i) Explain the causes of:

(a) cross-contamination in a refrigerator;

.....
.....

(b) freezer burn.

.....
.....

(ii) Suggest ways of reducing the risk of:

(a) cross-contamination in a refrigerator;

.....
.....

(b) freezer burn.

.....
.....

[4]

(d) Explain why poultry and large pieces of meat should be completely defrosted before cooking.

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

(e) (i) Explain the importance of blanching vegetables before they are frozen.

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

(ii) Give step by step instructions for blanching a named vegetable.

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

[5]

12 Sauces can be made in a variety of ways and make an important contribution to meals.

(a) Ingredients for a roux sauce

- 15 g (1/2 oz) plain flour
- 15 g (1/2 oz) margarine or butter
- 250 ml (1/2 pt) full cream milk

(i) Which of these ingredients are used to make the roux?

..... [1]

(ii) Describe how the roux is made.

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

(iii) Give instructions for completing the sauce.

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

(b) Describe, in detail, how you would adapt the ingredients of this plain roux sauce when:

(i) making an 'au gratin' dish;

.....
.....

(ii) using as an accompaniment to a steamed chocolate pudding;

.....
.....

(iii) reducing its energy value.

.....
.....

[6]

(c) Explain how the sauce thickens.

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

(d) (i) State **four** other methods of sauce making.

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

(ii) Explain why sauces are served with food.

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

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