

Centre Number	Candidate Number	Name
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CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

**FOOD SCIENCE**

**0635/03**

Paper 3 Alternative to Coursework

May/June 2003

**2 hours**

Candidates answer on the Question Paper.

Additional Materials:

Coloured pencils      Compass

Eraser                      Pencil

Ruler

**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 in the spaces provided on the Question Paper.  
You may use a soft pencil for any diagrams, graphs, or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

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.

If you have been given a label, look at the details. If any details are incorrect or missing, please fill in your correct details in the space given at the top of this page.

Stick your personal label here, if provided.

For Examiner's Use	
Question 1	
Question 2	
Question 3	
<b>TOTAL</b>	

This document consists of **12** printed pages.



Answer **all** questions.

1 There has been an increase in the number of reported cases of food poisoning in recent years.

(a) The following information was given by a local health department:

Cases of food poisoning over the last five years	
Year 1	6484
Year 2	6268
Year 3	7756
Year 4	7965
Year 5	8712

(i) Calculate the difference in number of cases between:

(a) years 1 and 2; .....

(b) years 4 and 5. ....[2]

(ii) Suggest **four** possible reasons for the difference in the number of cases.

.....

.....

.....

.....[4]

**(b) (i)** Present the information on the number of food poisoning cases over the five years as a bar chart.

[8]

**(ii)** Evaluate the quality of your bar chart and comment on its usefulness.

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

**(iii)** Suggest **two** other ways of presenting the data.

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

(c) (i) List **four** symptoms of food poisoning.

- 1. ....
- 2. ....
- 3. ....
- 4. ....

[2]

(ii) Explain what is meant by the following terms used in relation to food poisoning:

(a) cross-contamination;

.....  
.....

(b) incubation period;

.....  
.....

(c) toxic food poisoning;

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.....

(d) "high risk" foods.

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[4]

(d) State and explain **five** points you would consider when observing the hygiene of food shops or stalls.

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[5]



2 Protein is an important nutrient in the diet.

(a) Explain the importance of protein foods in the diet.

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.....[4]

(b) Identify and explain **four** reasons why individuals might choose to avoid animal sources of protein in their diet.

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.....[6]

(c) You are interested in finding out the main sources of protein in the diet of a group of people.

(i) List the different sources of protein available which could be used in a chart as a basis for your investigation.

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

- (ii) Prepare a chart and explain how you might use it to record the frequency and type of protein eaten by your target group.

[7]

(d) Sources of protein can be preserved in many ways.  
Identify **five** methods of preservation and in each case name a source of protein which could be preserved by that method. State the scientific principles involved in each method of preservation.

Method of preservation ..... Source of protein .....

Scientific principles .....

.....

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Method of preservation ..... Source of protein .....

Scientific principles .....

.....

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Method of preservation ..... Source of protein .....

Scientific principles .....

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Method of preservation ..... Source of protein .....

Scientific principles .....

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Method of preservation ..... Source of protein .....

Scientific principles .....

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.....[10]



3 You have been asked to investigate the use of different fats for making shortcrust pastry, keeping the flour constant.

(a) Study the recipe below:

200 g (8 oz) flour  
100 g (4 oz) fat  
2.5 ml ( $\frac{1}{2}$  teasp.) salt  
2 × 15 ml (2 tablesp.) cold water.

(i) State the proportion of fat to flour in this recipe.

.....[1]

(ii) List **four** ways of varying the fat used in the recipe.

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

(iii) Describe, with reasons, how you would prepare and roll shortcrust pastry.

.....[10]

(iv) Give the temperature at which shortcrust pastry should be baked.

.....[1]

(b) Identify **eight** controls you would follow when carrying out the investigation to ensure a fair comparison between the samples of pastry made with the different fats.

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.....[8]

(c) State the criteria a tasting panel could use when evaluating the pastries.

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

(d) One method which a tasting panel could use to indicate preference is to give a score on a scale from 1 to 5, with 1 indicating the least preferred. Suggest **two** other methods which could be used.

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

(e) Explain why the following faults may occur when making short crust pastry:

(i) pastry which has shrunk;

.....  
.....  
.....[1]

(ii) hard and tough pastry;

.....  
.....  
.....[1]

(iii) crumbly pastry which is difficult to roll;

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.....[1]

(iv) blistered pastry.

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.....[1]