

General Certificate of Education
June 2004
Advanced Level Examination



HOME ECONOMICS
Unit 6 Food Science and Technology

HEC6

Monday 21 June 2004 Afternoon Session

In addition to this paper you will require:
an 8-page answer book

Time allowed: 1 hour 30 minutes

Instructions

- Use a blue or black ink (or ball-point) pen. Pencil should only be used for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is HEC6.
- Answer **two** questions.
- Fasten any supplementary sheets you use to the answer book before handing it to the invigilator at the end of the examination.

Information

- The maximum mark for this unit is 50.
- Mark allocations are shown in brackets.
- You will be assessed on your ability to use an appropriate form and style of writing, to organise relevant information clearly and coherently, and to use specialist vocabulary, where appropriate. The degree of legibility of your handwriting and the level of accuracy, punctuation and grammar will also be taken into account.

Answer **two** questions.

Each question carries 25 marks

- 1 (a) Describe the physical and chemical properties of proteins which enable eggs to be used in many different ways in the preparation and cooking of food.
 Illustrate your answer with specific examples. (12 marks)
- (b) What are the nutritional benefits of including eggs in the diet? (8 marks)
- (c) Certain groups of the population are said to be “at risk” when consuming eggs.
 (i) Identify **two** of these groups. (2 marks)
 (ii) State the advice you would give to them on the preparation of eggs for their consumption. (3 marks)
- 2 The Food Commission, in partnership with the Maternity Alliance, undertook a survey of 46 pregnant women aged under 18. The table below shows a typical daily diet reported by a pregnant teenager.

Meal	Food
Breakfast	Crunchy nut cornflakes with whole milk Milky tea with two sugars Glass of whole milk
Lunch	Packet of crisps 4 gingernut biscuits 2 chocolate digestives Milky tea with two sugars
Supper	2 sausages (fried), chips, peas and gravy Ice-cream
Snack	Smoky bacon flavour crisps Milky tea with two sugars

(Adapted from the Food Commission Food Magazine April/June 2003)

- (a) Use the information from the table to evaluate the nutritional adequacy of this diet for a pregnant teenager. (12 marks)
- (b) Suggest how it could be brought into line with current nutritional guidelines. (7 marks)
- (c) What are the consequences of such a diet for both the mother and the baby? (6 marks)

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- 3 (a) Give a detailed account of the effect of commercial processing on the palatability and nutritional value of cow's milk. *(8 marks)*
- (b) Explain the functions of the following in the production of dairy products:
- bacterial cultures;
 - enzymes;
 - acids. *(9 marks)*
- (c) There is a wide variety of milk and milk products available to consumer groups. Suggest possible reasons for this. *(8 marks)*
- 4 The Department of Health recommends that we eat five portions of fruit and vegetables a day.
- (a) Discuss the reasons for this advice and suggest a range of interesting ways in which it can be achieved. *(8 marks)*
- (b) How are the characteristics of raw fruit and vegetables used to advantage in food preparation and cooking? *(5 marks)*
- (c) Describe the changes that take place during the preparation and cooking of fruit and vegetables. *(12 marks)*

END OF QUESTIONS

THERE ARE NO QUESTIONS PRINTED ON THIS PAGE