

General Certificate of Education
June 2005
Advanced Level Examination



HOME ECONOMICS
Unit 6 Food Science and Technology

HEC6

Monday 20 June 2005 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

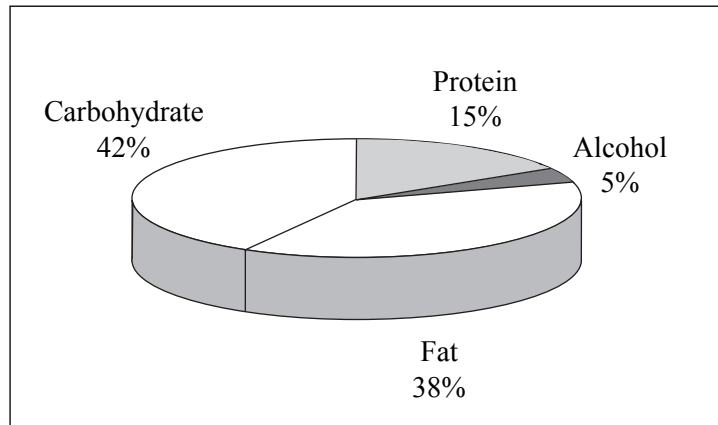
- The maximum mark for this unit is 50.
- Mark allocations are shown in brackets.
- You will be assessed on your ability to use an appropriate form and style of writing, to organise relevant information clearly and coherently, and to use specialist vocabulary, where appropriate. The degree of legibility 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 Study the information given below.

Contribution of fat, protein, carbohydrate and alcohol to the energy intake in the average British diet.



Source: DEFRA & National Statistics (2001)
National Food Survey 2000, The Stationary Office, London

- (a) Using the information given, explain how the average British diet compares with the guidelines recommended in the COMA 41 report. (5 marks)
- (b) Describe the concept of energy balance and discuss the various factors which influence the energy requirements of an individual. (10 marks)
- (c) What dietary advice would you give to a 16-year-old boy who has a body mass index of 30? Suggest a day's meals which could form part of this advice. (10 marks)
- 2 (a) Identify the three main groups of carbohydrates, giving the chemical formula for each. (6 marks)
- (b) In the planning of meals, why is bread considered to be a valuable food commodity? (7 marks)
- (c) Discuss the function of the ingredients used in bread making. (12 marks)
- 3 The Food Standards Agency has challenged the food industry to reduce the salt it adds to processed food.
- (a) What are the possible health benefits to the consumer? (4 marks)
- (b) Describe the functions of salt in the body. (4 marks)
- (c) With reference to **four** different groups of additives, describe their functions in food processing. Illustrate your answer with examples. (12 marks)
- (d) Many consumers are concerned about the use of food additives. Outline the reasons for this concern. (5 marks)

- 4 (a) Describe the three main types of vegetarian diet and for each type, discuss how the following may be provided:

protein
calcium
vitamin B₁₂
vitamin D
iron
energy.

(18 marks)

- (b) Evaluate the benefits and possible disadvantages of a vegetarian diet.

(7 marks)

END OF QUESTIONS

THERE ARE NO QUESTIONS PRINTED ON THIS PAGE