

General Certificate of Education
June 2007
Advanced Level Examination



HOME ECONOMICS
Unit 6 Food Science and Technology

HEC6

Wednesday 13 June 2007 1.30 pm to 3.00 pm

For this paper you must have:

- an 8-page answer book

You may use a calculator.

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen.
- 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.
- Do all rough work in the answer book. Cross through any work you do not want to be marked.

Information

- The maximum mark for this unit is 50.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers. Quality of Written Communication will be assessed in all answers written in continuous prose.

Answer **two** questions.

Each question carries 25 marks.

- 1 (a) What are the two main types of non-starch polysaccharide (NSP/dietary fibre)? Give examples of foods that are good sources of each. *(4 marks)*
- (b) Describe the benefits to health of eating NSP. *(5 marks)*
- (c) (i) What is the recommended amount of NSP that adults should eat each day? *(1 mark)*
- (ii) Why should children eat less NSP than that recommended for adults? *(3 marks)*
- (d) Using the data below, comment on the nutritional value of each breakfast cereal, taking into account the health claims made on the packet. *(12 marks)*

Cereal per 100 g	Energy kcal	Sugars g	Fats g	NSP g	Sodium g	Health claims
A	368	21.6	3.9	6.5	0.5	4 wholegrain goodness
B	373	16.8	1	2.4	0.6	99% fat free
C	408	30.7	12	4.8	0.1	No claim made
D	350	1	2.6	11.9	Trace	100% good for you
E	351	29.7	8.5	8.1	Trace	No claim made

- 2 The proportion of adults who are overweight or obese in the UK continues to increase.
- (a) Explain the following terms:
- (i) overweight;
- (ii) obese. *(2 × 3 marks)*
- (b) Suggest reasons for this increase and discuss the effect of obesity on health. *(12 marks)*
- (c) What nutritional criteria must any weight-reducing regime fulfil if it is to be successful? *(7 marks)*

- 3 (a) Explain each of the following terms:
- (i) DRVs;
 - (ii) RNIs;
 - (iii) EARs. *(3 × 2 marks)*
- (b) What are the nutritional requirements of people over the age of 70? *(9 marks)*
- (c) Poor nutrition in the over-70s can lead to a range of problems. Discuss these problems and possible ways of resolving them. *(10 marks)*
- 4 (a) Using the data from the table below, describe the trends shown and suggest possible reasons for them. *(10 marks)*

UK average consumption of fruit and vegetables in grams per person per week

	1985	1995	2000	2002	2003
Fresh fruit	540 g	693 g	765 g	750 g	794 g
Processed fruit	286 g	375 g	424 g	406 g	413 g
Fresh green vegetables	287 g	233 g	246 g	229 g	231 g
Other fresh vegetables	461 g	486 g	506 g	502 g	505 g
Processed vegetables excluding potatoes	459 g	431 g	395 g	360 g	363 g
Potatoes	1340 g	1077 g	1002 g	907 g	867 g

- (b) Discuss the contribution of fruit and vegetables to the UK diet. *(8 marks)*
- (c) How can the loss of nutrients be reduced when preparing and cooking vegetables? *(7 marks)*

END OF QUESTIONS

There are no questions printed on this page