

General Certificate of Education
January 2010
Advanced Subsidiary Examination



HEALTH AND SOCIAL CARE
Unit 5 Nutrition and Dietetics

HC05

Friday 15 January 2010 9.00 am to 10.30 am

For this paper you must have:

- an 8-page answer book.

Time allowed: 1 hour 30 minutes

Instructions

- Use black ink or black 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 HC05.
- Answer **all** 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 paper is 60.
- The marks for questions are shown in brackets.
- You will be marked on your ability to use good English, to organise information clearly and to use specialist vocabulary where appropriate.

Answer **all** questions.

There are 15 marks for each question.

- 1 Zac is 14 years old. He overeats and his diet is high in sugar but low in protein. He has been advised to eat more fresh fruit to improve his diet.
- (a) Explain the likely impact on health and development for Zac if he continues to eat a diet which is
- (i) low in protein *(4 marks)*
- (ii) high in sugars. *(3 marks)*
- (b) (i) Name **one** type of food with a high protein content. *(1 mark)*
- (ii) Name **one** type of food with a high sugar content. *(1 mark)*
- (c) Name **two** chemical elements which are commonly found in proteins but not at all in sugars. *(2 marks)*
- (d) Evaluate the suggestion that Zac should eat more fresh fruit to improve his diet. *(4 marks)*
- 2 Farah is 30 years old. Her typical dietary intake of four food components is shown in the table below. The Dietary Reference Values (DRVs) for females aged 18–54 years old are also shown.

Food Components	Farah's typical daily intake	Dietary Reference Values Females 18–54 years
Vitamin A	760 µg	750 µg
Vitamin B2 (Riboflavin)	0.8 mg	1.3 mg
Vitamin K	79 µg	80 µg
Iron	10 mg	15 mg

- (a) (i) What conclusions can be drawn about Farah's daily intake of the four food components? *(4 marks)*
- (ii) Give **one** likely effect on Farah of each of the food components if her intake remains at these levels. *(4 marks)*
- (b) From the information in the table above suggest, with reference to named foods, **two** different ways to improve Farah's diet. *(4 marks)*
- (c) Give **three** different reasons why Farah needs cholesterol in her diet. *(3 marks)*

- 3 (a) Antioxidants are one type of food additive. Name **three** other types of food additive and give a different reason why each is used. *(6 marks)*
- (b) Discuss the different principles that need to be considered when planning a balanced diet for an individual. *(9 marks)*
- 4 A study of food poisoning outbreaks caused by four different species of bacteria produced the data shown in the table below.

Species of bacteria causing outbreaks	Number of reported cases in 2006	Number of reported cases in 2007
Salmonella	910	921
Clostridium	84	130
Staphylococcus	9	7
Bacillus	5	4

- (a) What conclusions can be drawn from the data in the table above? *(6 marks)*
- (b) Suggest **three** different reasons why the four different species of bacteria do not each cause the same number of reported cases. *(3 marks)*
- (c) Explain why the young and the old are most at risk from food poisoning. *(3 marks)*
- (d) Explain how refrigerating foods can reduce the risk of food poisoning. *(3 marks)*

END OF QUESTIONS

There are no questions printed on this page