

General Certificate of Education
January 2009
Advanced Subsidiary Examination



HEALTH AND SOCIAL CARE
Unit 5 Nutrition and Dietetics

HC05

Thursday 15 January 2009 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 Alison is a 25-year-old female. She overeats and her diet is high in sugars but low in non-starch polysaccharides (NSP).

(a) Explain the likely health problems for Alison if she continues to eat a diet which is:

(i) high in sugars (3 marks)

(ii) low in non-starch polysaccharides. (3 marks)

(b) Suggest **two** different named foods Alison could eat to improve the non-starch polysaccharide content of her diet. (2 marks)

(c) Give the basic chemical composition of non-starch polysaccharides. (3 marks)

(d) (i) Name **two** macronutrients other than carbohydrates that Alison will need in her diet. (2 marks)

(ii) For each of the macronutrients you have named in part (d)(i), give **one** different reason why it would be needed by Alison. (2 marks)

2 Ramon is a male adult. His typical daily intake of four micronutrients is shown in the table below. The appropriate Dietary Reference Values (DRVs) for these micronutrients are also shown.

| Micronutrient | Ramon's typical daily intake | Dietary Reference Values |
|---------------|------------------------------|--------------------------|
| Vitamin A | 745 µg | 750 µg |
| Vitamin C | 18 mg | 30 mg |
| Calcium | 350 mg | 500 mg |
| Zinc | 12 mg | 11 mg |

(a) (i) What conclusions can be drawn about Ramon's daily intake of the four micronutrients? (4 marks)

(ii) Give **one** likely effect on Ramon of each of the micronutrients if his intake remains at these levels. (4 marks)

- (b) With reference to named foods, suggest **two** different ways to improve Ramon's diet. *(4 marks)*
- (c) Apart from gender, suggest **two** different factors which help to determine dietary needs of a male adult. *(2 marks)*
- (d) Give **one** reason why water is essential in the diet. *(1 mark)*

3 (a) Explain the dietary implications of:

- (i) being a vegan *(2 marks)*
- (ii) being Muslim *(3 marks)*
- (iii) having lactose intolerance. *(3 marks)*
- (b) (i) What are phytochemicals? *(3 marks)*
- (ii) Give **two** possible benefits of consuming phytochemicals. *(2 marks)*
- (c) Flavour enhancers are one type of food additive.
Name **one** other common type of food additive and give a reason why it is used. *(2 marks)*

4 A study of reported cases of food poisoning gave the following results.

| Organism causing food poisoning | Likely food sources | Reported cases |
|---------------------------------|---------------------|----------------|
| Campylobacter | Undercooked poultry | 721 |
| E-Coli | Undercooked beef | 173 |
| Salmonella | Undercooked poultry | 150 |
| Listeria | Raw vegetables | 2 |

- (a) (i) What conclusions can be drawn from the information in the table above? *(4 marks)*
- (ii) Suggest **two** possible different reasons why the numbers of reported cases of food poisoning caused by campylobacter and listeria differ so greatly. *(2 marks)*
- (b) Explain why the following help minimise the risk of infection:
- (i) wearing disposable plastic gloves when handling food *(3 marks)*
- (ii) keeping sandwiches at or below 5 °C *(3 marks)*
- (iii) fitting lids to waste food bins. *(3 marks)*

END OF QUESTIONS

There are no questions printed on this page