



National  
Qualifications  
SPECIMEN ONLY

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**SQ23/H/01**

**Health and Food  
Technology**

Date — Not applicable

Duration — 1 hour and 30 minutes

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**Total marks — 50**

Attempt ALL questions.

Write your answers clearly in the answer booklet provided. In the answer booklet, you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



\* S Q 2 3 H 0 1 0 1 \*

**Total marks — 50**  
**Attempt ALL questions**

**Question 1**

A nursery is reviewing the snacks it provides. The snacks must be healthy and appealing to the children.

- (a) The snack offered by the nursery must include fruit or vegetables.

Explain how a diet high in fruit and vegetables can reduce the risk of the following dietary diseases:

- bowel disease
- obesity.

2

- (b) Fruit and vegetables may be bought in modified atmosphere packaging (MAP).

Evaluate the suitability of modified atmosphere packaging for use in the nursery.

3

- (c) The nursery aims to meet the nutritional needs of the children.

The table below shows the Dietary Reference Values for 4-6 year-old males.

<b>Dietary Reference Values for 4-6 year-old males</b>				
<b>Estimated average requirements</b>	<b>Reference Nutrient Intakes</b>			
<b>Energy (MJ)</b>	<b>Vitamin B2 (mg)</b>	<b>Vitamin C (mg)</b>	<b>Calcium (mg)</b>	<b>Sodium (mg)</b>
4.06	0.8	30	450	700

The food intake of a four year-old boy at the nursery includes the following snack:

**Snack**

White breadsticks and Carrot sticks with Smoked mackerel dip and Salsa dip

Question 1 (continued)

The table below shows the dietary analysis of his food intake, including the snack.

Dietary analysis of the four year-old boy's food intake				
Estimated average requirements	Reference Nutrient Intakes			
Energy (MJ)	Vitamin B2 (mg)	Vitamin C (mg)	Calcium (mg)	Sodium (mg)
4.91	0.9	24	455	850

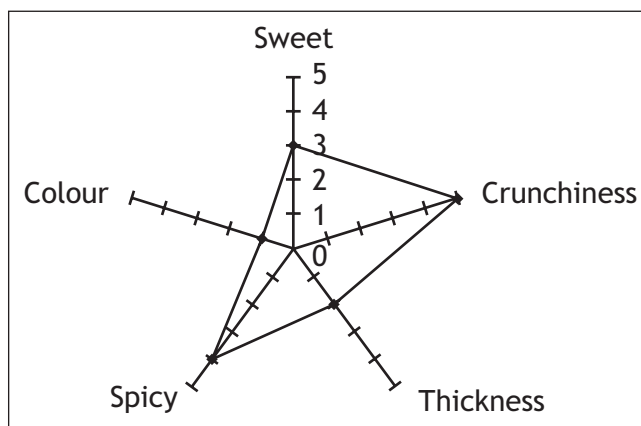
Analyse **three different** aspects of the boy's diet, in relation to the Dietary Reference Values (DRVs) for 4-6 year-old males.

For **each** aspect of his diet you have identified, comment on the impact of his diet in relation to the DRVs, the potential consequence for his health and a conclusion about the contribution made by the snack.

9

(d) A food manufacturer is developing a salsa dip for children.

The star profile below shows the results of sensory testing of a prototype of the dip.



**Key:** 5 = very high  
 4 = high  
 3 = neither high nor low  
 2 = low  
 1 = very low

Evaluate the suitability of this dip for children.

4

(e) Explain the role of staff from the Environmental Health Department in helping the nursery staff reduce the risk of food poisoning.

2

## Question 2

A retailer is opening a new food store.

- (a) The retailer is planning to sell a range of organic produce.  
Evaluate the impact of including a range of organic produce in the store. 4
- (b) The retailer wants to produce a range of vegetable soups for sale in the food store.  
Explain how the loss of vitamin C could be minimised when preparing vegetables for the soup. 2
- (c) Evaluate the use of each of the following methods of advertising for the retailer:  
• leaflets  
• radio advertising. 4

## Question 3

A manufacturer wants to add cupcakes to the current range of baked products on sale.

- (a) Explain why the manufacturer would carry out the following stages of food product development:  
• prototype production  
• first production run. 4
- (b) Evaluate the use of additives in the cupcakes. 4
- (c) Describe the result on the baked cupcakes of increasing the proportion of sugar in the cake mixture. 2

## Question 4

Manufacturers develop new products to meet the needs of consumers.

- (a) Explain nutritional factors the manufacturer should consider when developing food products that could help to reduce the risk of coronary heart disease (CHD). 6
- (b) Explain how the information that the manufacturer could include on the food product label, **other than ingredients and nutritional information**, could help a consumer with coronary heart disease (CHD) to make informed food choices. 4

[END OF SPECIMEN QUESTION PAPER]