



National  
Qualifications  
2023 MODIFIED

**X836/76/11**

**Health and Food  
Technology**

MONDAY, 15 MAY

1:00 PM – 3:00 PM

**Total marks — 50**

Attempt Question 1 and any THREE from the following FOUR 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.



\* X 8 3 6 7 6 1 1 \*

Total marks — 50

Attempt Question 1 and any THREE from the following FOUR questions

Question 1

- (a) Evaluate the contribution of sodium in the diet. 3
- (b) Explain two factors that could contribute towards type 2 diabetes. 2
- (c) A playgroup aims to meet the nutritional needs of toddlers.

Table 1 shows the Dietary Reference Values for 1–3 year old females.

Dietary Reference Values for 1–3 year old females				
Estimated average requirements for 3 year old female	Reference Nutrient Intakes for 1–3 year old females			
Energy (Kcal)	Vitamin A ( $\mu\text{g}$ )	Calcium (mg)	Protein (g)	Vitamin C (mg)
1076	400	350	14.5	30

The food intake of a 3 year old female includes the following meal.

<p>Chicken Noodle Soup Carrot and Pepper Sticks Glass of Strawberry Milk</p>
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Table 2 shows the dietary analysis of her food intake, including the meal.

Dietary analysis of the 3 year olds food intake				
Energy (Kcal)	Vitamin A ( $\mu\text{g}$ )	Calcium (mg)	Protein (g)	Vitamin c (mg)
1000	250	400	16.2	24

Analyse **three different** aspects of the female's diet, in relation to the Dietary Reference Values (DRVs) for 3 year old females.

For **each** aspect you should include:

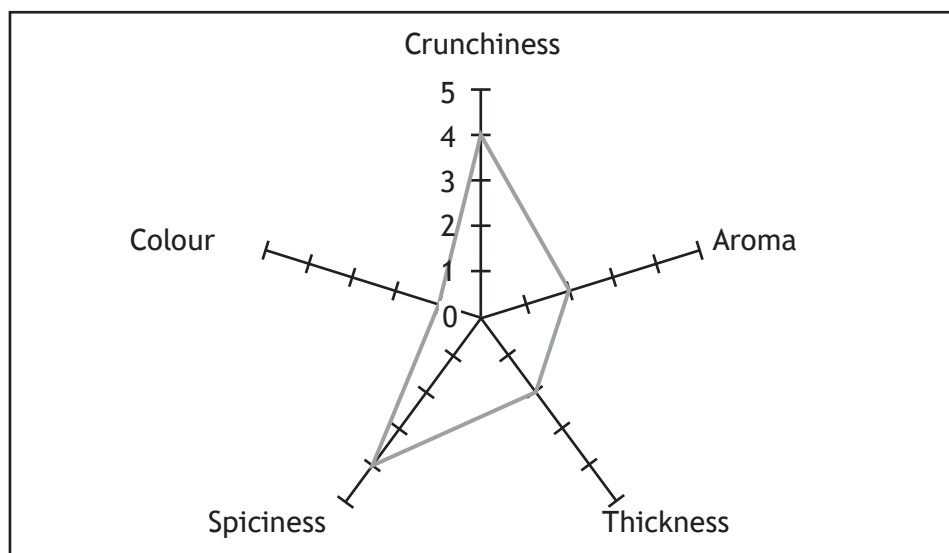
- a comment on the impact of her food intake in relation to the Dietary Reference Values
- a potential consequence for her health
- a conclusion about the contribution made by her meal to her food intake.

9

## Question 1 (continued)

- (d) A food manufacturer is developing a chicken noodle soup for toddlers.

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



Key: 5 = very high  
4 = high  
3 = slightly high  
2 = low  
1 = very low

Evaluate the suitability of this soup for toddlers.

4

- (e) Explain **two** ways that Food Standards Scotland protects the consumer when purchasing food.

2

[Turn over

Attempt any **THREE** from the following **FOUR** questions

### Question 2

- (a) Evaluate ways the following meal could help an adult to follow **five** different pieces of current dietary advice.

5

<p><b>Spicy Mince Wrap</b>  <b>Brown Rice</b>  <b>Fruit Smoothie</b></p>
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- (b) Explain **three** ways that the Environmental Health Department protects the consumer.

3

- (c) Explain the interrelationship between dietary fibre and water.

2

### Question 3

- (a) A chicken fried rice dish has failed to meet sales targets.

Explain how a food manufacturer could improve each of the following stages of food product development for the chicken fried rice dish.

- concept generation
- product testing
- first production run
- product launch.

4

- (b) Explain how the food manufacturer could prevent cross-contamination when producing the chicken fried rice dish.

2

- (c) Evaluate each of the following technological developments for a consumer.

- ultra heat treated products
- modified atmosphere packaging.

4

**Question 4**

- |  |          |
|--|----------|
| (a) Explain <b>two</b> factors that may hinder the absorption of iron.                             | <b>2</b> |
| (b) Evaluate the impact of using Fair Trade foods in a restaurant.                                 | <b>3</b> |
| (c) Explain the benefits to health of a balanced and varied diet.                                  | <b>2</b> |
| (d) Evaluate each of the following marketing techniques used to promote a newly opened restaurant. |          |
| • promotional leaflet  |          |
| • social media campaign.   | <b>3</b> |

**Question 5**

- |   |          |
|---|----------|
| (a) Explain <b>four</b> factors which could influence a student's choice of food.   | <b>4</b> |
| (b) Explain the functional properties of the following ingredients in a Swiss roll. |          |
| • eggs  |          |
| • sugar.  | <b>3</b> |
| (c) Evaluate the use of food additives in baked products.                           | <b>3</b> |

**[END OF QUESTION PAPER]**

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