



National
Qualifications
2022 MODIFIED

X836/76/11

**Health and Food
Technology**

MONDAY, 9 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 fruit and vegetables in the diet.
- (b) A community centre is hosting a lunch for the elderly.

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Table 1 shows the dietary reference values for males aged 65–74.

Dietary reference values for males aged 65–74				
Estimated average requirements	Reference nutrient intakes			
Energy (Kcal)	Protein (g)	Sodium (mg)	Fibre (g)	Vitamin D (μg)
2342	53.3	1600	30	10

The food intake of a 70-year-old male includes the following lunch.

Lunch
Sweet potato and lentil soup Ham and cheese sandwich on wholemeal bread

Table 2 shows the dietary analysis of the 70-year-old male's food intake, including the lunch.

Dietary analysis of the 70-year-old male's food intake				
Estimated average requirements	Reference nutrient intakes			
Energy (Kcal)	Protein (g)	Sodium (mg)	Fibre (g)	Vitamin D (μg)
2157	58.5	1895	23	8

Question 1 (continued)

Analyse **three different** aspects of the man's food intake shown in **Table 2**, in relation to the dietary reference values (DRVs) for a 70-year-old male shown in **Table 1**.

For **each** aspect you should include:

- a comment on the impact of his food intake in relation to the dietary reference values
- a potential consequence for his health
- a conclusion about the contribution made by his lunch to his food intake.

9

(c) Explain the effects of osteoporosis on health.

3

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

- functional foods
- cook-chill products.

4

[Turn over

Attempt any THREE from the following FOUR questions

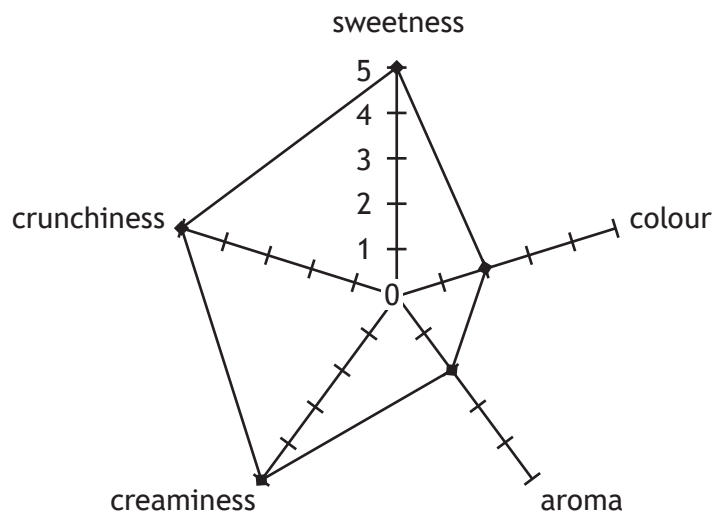
Question 2

(a) Explain why a manufacturer carries out the following stages of food product development when developing a new muesli and yoghurt breakfast pot.

- concept screening
- first production run
- marketing plan
- product launch.

4

(b) The star profile below shows the results of sensory testing of a prototype of the muesli and yoghurt breakfast pot.



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

Evaluate the suitability of this muesli and yoghurt breakfast pot for teenagers.

4

(c) Explain the role of Food Standards Scotland in protecting the consumer.

2

Question 3

- (a) Explain the interrelationship between each of the following:
- calcium, phosphorus and vitamin D
 - vitamin C and iron.
- (b) Explain how a diet containing alternative proteins can contribute to a healthy diet.
- (c) Evaluate the use of food additives in breakfast cereals.

Question 4

- (a) Explain the functional properties of the following ingredients in a lemon meringue pie.
- eggs
 - fat.
- (b) Evaluate how each of the following affects consumer food choice.
- food miles
 - nutritional knowledge.
- (c) Explain **three** ways Trading Standards departments can protect the consumer.

Question 5

- (a) Evaluate ways this meal could help a student to follow **four** different pieces of current dietary advice.
- creamy Mexican chicken
 - baked potato.
- (b) Explain **three** ways that canteen staff can prevent food poisoning in the preparation of the creamy Mexican chicken.
- (c) Evaluate the use of genetically modified ingredients in a canteen.

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