



National
Qualifications
2019

X836/76/11

**Health and Food
Technology**

WEDNESDAY, 22 MAY

1:00 PM – 3:00 PM

Total marks — 60

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.



* X 8 3 6 7 6 1 1 *

Total marks — 60
Attempt ALL questions

Question 1

- (a) Explain **four** factors which may contribute to childhood obesity. 4

- (b) Explain how each of the following steps taken by an after-school club could prevent food poisoning when preparing snacks. 3
 - (i) Staff training
 - (ii) Purchasing ingredients from reputable suppliers

- (c) An after-school club aims to meet the nutritional needs of its children.

Table 1 shows the dietary reference values for females 11–14.

Dietary reference values for females aged 11–14 years old				
Estimated average requirements	Reference nutrient intakes			
Energy (kcal)	Vitamin A (μg)	Vitamin C (mg)	Iron (mg)	Fibre (g)
2032	600	35	14.8	20

The food intake of an 11 year old girl includes the following lunch.

Milkshake
Macaroni cheese
Spinach and rocket salad
Chips

Table 2 shows the dietary analysis of the 11 year old girl's food intake, including the lunch.

Dietary analysis of the 11 year old's food intake				
Energy (kcal)	Vitamin A (μg)	Vitamin C (mg)	Iron (mg)	Fibre (g)
1850	450	37	8.5	16

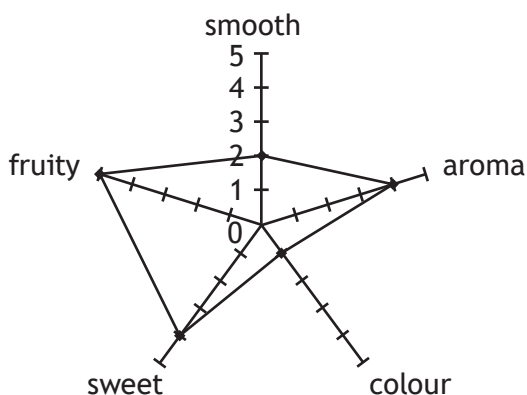
Analyse **three different** aspects of the girl's food intake shown in Table 2, in relation to the dietary reference values for 11–14 year old females shown in Table 1.

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 lunch to her food intake.

Question 1 (continued)

(d) The star profile below shows the results of sensory testing of the milkshake.



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

Evaluate the suitability of this milkshake for children.

4

Question 2

(a) Evaluate the use of cook-chill products for students.

3

(b) Evaluate the impact a diet high in fruit and vegetables may have on each of the following dietary diseases.

3

- Bowel disease
- Type 2 diabetes

(c) Explain **two** factors that may hinder the absorption of calcium.

2

(d) Evaluate the impact of food miles on a consumer's choice of food.

2

Question 3

- (a) Explain how a food manufacturer could improve each of the following stages of food product development for a new fish product which failed to meet sales targets. 4
- Concept screening
 - Prototype production
 - First production run
 - Launch
- (b) Evaluate the contribution of oily fish in the diet. 3
- (c) Explain how an Environmental Health Officer can protect the consumer when purchasing food. 3

Question 4

- (a) Evaluate the impact of the following factors on a consumer's choice of food. 4
- Peer pressure
 - Nutritional knowledge
 - Available income
- (b) Explain how food additives can benefit the consumer. 4
- (c) Explain the role of the Advertising Standards Authority in protecting the consumer. 2

Question 5

- (a) Explain the function of eggs in baked products. 2
- (b) Evaluate each of the following for the consumer. 4
- (i) Fair trade
 - (ii) Genetically modified foods
- (c) Evaluate ways the following meal could help a vegetarian to follow **four** different pieces of current dietary advice. 4
- Mixed bean and vegetable chilli
 - Potato wedges

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