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School code

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School name

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Given name/s

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Family name

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Attach your
barcode ID label here

Book

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of

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books used

External assessment 2021

Question and response book

Food & Nutrition

Time allowed

- Perusal time — 10 minutes
- Working time — 120 minutes

General instructions

- Answer all questions in this question and response book.
- Write using black or blue pen.
- Respond in full sentences, which may include dot points.
- Planning paper will not be marked.

Section 1 (23 marks)

- 4 short response questions

Section 2 (41 marks)

- 1 extended response question





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Section 1

Instructions

- If you need more space for a response, use the additional pages at the back of this book.
 - On the additional pages, write the question number you are responding to.
 - Cancel any incorrect response by ruling a single diagonal line through your work.
 - Write the page number of your alternative/additional response, i.e. See page ...
 - If you do not do this, your original response will be marked.
 - This section has four questions and is worth 23 marks.
-

QUESTION 1 (2 marks)

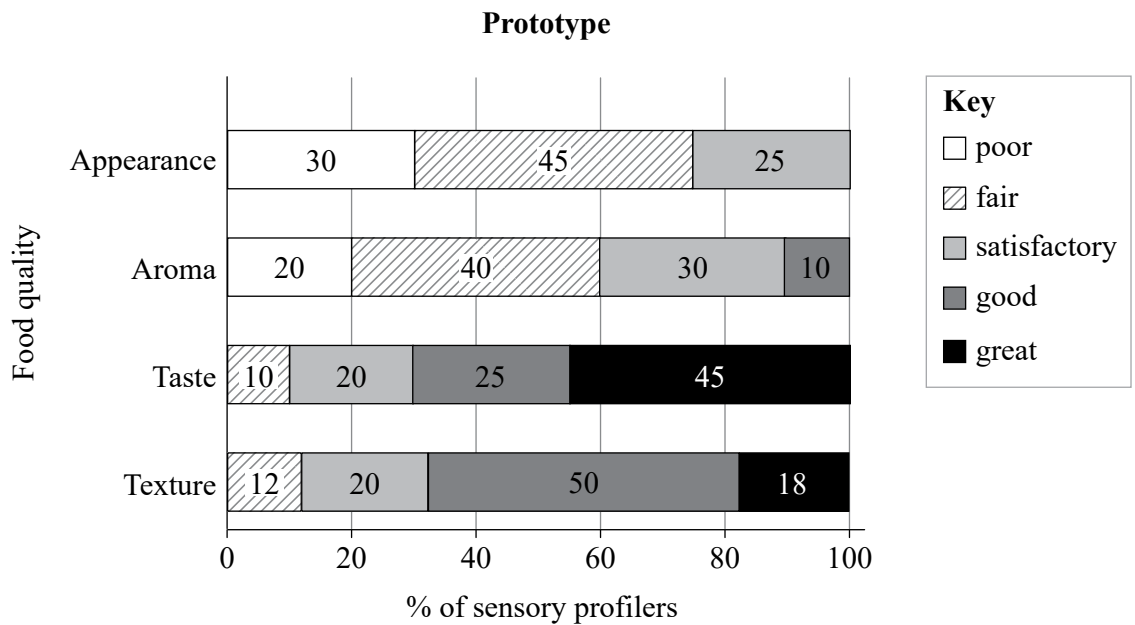
Identify the information that is mandated to be included on a food product's nutrition information panel to meet Food Standards Code requirements.

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QUESTION 2 (7 marks)

- a) List three considerations for a company when formulating a food product for a nutrition consumer market (NCM). [3 marks]

- b) Analyse the graph to identify the sensory properties of a prototype that need to be refined to improve the product. Use evidence from the graph to support your response. [2 marks]



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c) Explain how the prototype could be reformulated to improve the sensory profiling data. [2 marks]

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QUESTION 3 (6 marks)

- a) Describe a nutritional requirement that fitness-focused consumers and consumers experiencing diabetes have in common. Provide a reason why each of these consumer markets has this requirement.

[3 marks]

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b) Analyse the information to identify the most suitable product for fitness-focused consumers and consumers experiencing diabetes. Justify your response using data from the nutrition information panel and ingredient list. [3 marks]

Nutrition information panel: Muesli bar 1			Nutrition information panel: Muesli bar 2			Nutrition information panel: Muesli bar 3		
Serving size: 27.0 g	Average quantity per serving	Average quantity per 100 g	Serving size: 65.0 g	Average quantity per serving	Average quantity per 100 g	Serving size: 42.0 g	Average quantity per serving	Average quantity per 100 g
Energy	460 kJ	1704 kJ	Energy	1100 kJ	1692 kJ	Energy	855 kJ	2036 kJ
Protein	1.7 g	6.3 g	Protein	5.8 g	8.9 g	Protein	4.3 g	10.2 g
Fat, total	2.6 g	9.6 g	Fat, total	10.2 g	15.7 g	Fat, total	9.0 g	21.4 g
– saturated	1.3 g	4.8 g	– saturated	1.1 g	1.7 g	– saturated	1.2 g	2.9 g
Carbohydrate	18.2 g	67.4 g	Carbohydrate	32.1 g	49.4 g	Carbohydrate	25.1 g	59.8 g
– sugars	6.5 g	24 g	– sugars	7.5 g	11.5 g	– sugars	10.6 g	25.2 g
Sodium	27 mg	100 mg	Sodium	42 mg	64.6 mg	Sodium	156 mg	371 mg
Ingredients Whole-grain wheat flour, white chocolate, emulsifier (soy lecithin), glucose syrup, wheat flour, malted barley and rice, milk solids, sugar, cocoa, humectants, vegetable oil, malt extract, flavour, salt, antioxidant			Ingredients Whole-grain rolled oats, glucose, sunflower oil, honey, roasted almonds, brown sugar, almond meal, glycerine, tapioca starch, wheat protein, flavour, emulsifier (soy lecithin), iodised salt, mineral salts			Ingredients Whole-grain rolled oats, sugar, sunflower oil, peanut butter (peanuts, salt), peanut pieces, molasses, honey, salt, raising agent (sodium bicarbonate), emulsifier (sunflower lecithin)		


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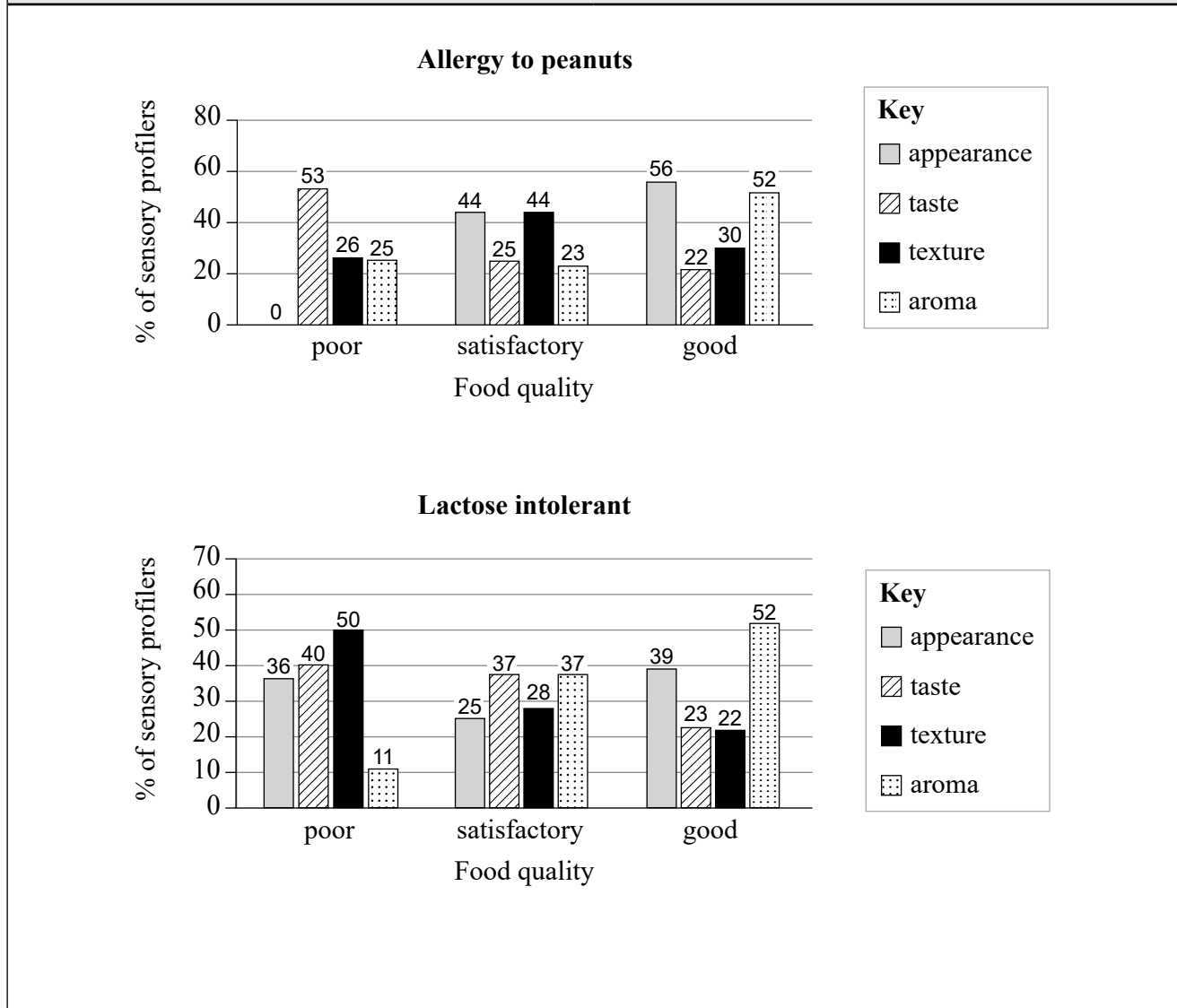
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QUESTION 4 (8 marks)

A survey of 100 consumers (50 each from two different NCMs) was conducted to determine which NCM does not have sufficient food choices in the marketplace. Results from the survey are shown.

1. Number of available products that suit the NCM	
Allergy to peanuts	Lactose intolerant
12.5% stated 1 to 5 suitable products	25% stated 1 to 5 suitable products
25% stated 6 to 10 suitable products	62.5% stated 6 to 10 suitable products
62.5% stated more than 10 suitable products	12.5% stated more than 10 suitable products



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3. The most important sensory property for the NCM

Numbered in order of importance: 1 for most important to 4 for least important

Allergy to peanuts

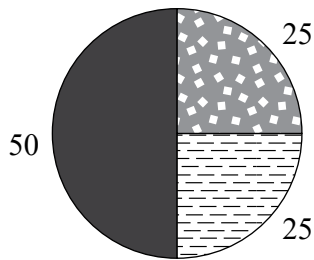
Appearance	4
Taste	1
Texture	3
Aroma	2

Lactose intolerant

Appearance	1
Taste	2
Texture	3
Aroma	4

4. Meal category that needs to be developed for the NCM

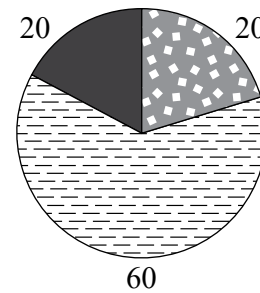
Allergy to peanuts



Key

- lunch meal
- evening meal
- snack

Lactose intolerant



Key

- lunch meal
- evening meal
- snack

- a) Determine the NCM that is most in need of a new food product. State the meal category this NCM specifies as most important. Justify your response using data from the survey results.

[5 marks]

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b) Use your response from Question 4a) to determine the three solution requirements needed to develop a new food product for this NCM.

[3 marks]

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Section 2

Instructions

- Read Stimulus 1 in the stimulus book.
 - This section has one question and is worth 41 marks.
 - Respond in 400 words or more.
-

QUESTION 5 (41 marks)

A food company has developed and tested three prototypes for an NCM. The results of the testing are documented in the test kitchen report in the stimulus book. Use the problem-solving process and data in the report to determine the best solution for the NCM.

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ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.

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