



National
Qualifications
SPECIMEN ONLY

SQ18/AH/01

**Health and Food
Technology**

Date — Not applicable

Duration — 2 hours

Total marks — 40

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 1 8 A H 0 1 *

Total marks — 40
Attempt ALL questions

1. Explain why minerals are essential components in the diet at different stages of life. Your explanation should include reference to **at least two** minerals and **at least two stages** of life. 10
2. Evaluate the impact of using two types of additives in the food manufacturing process. 10
3. Evaluate the potential influence of any two marketing techniques on consumer food choices. 10
4. Analyse the ways in which a child's early experience of food may affect their health. 10

[END OF SPECIMEN QUESTION PAPER]



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Marking Instructions

These Marking Instructions have been provided to show how SQA would mark this Specimen Question Paper.

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General Marking Principles for Advanced Higher Health and Food Technology

This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this Paper. These principles must be read in conjunction with the Detailed Marking Instructions, which identify the key features required in candidate responses.

- (a) Marks for each candidate response must always be assigned in line with these General Marking Principles and the Detailed Marking Instructions for this assessment.
- (b) Marking should always be positive. This means that, for each candidate response, marks are accumulated for the demonstration of relevant skills, knowledge and understanding: they are not deducted from a maximum on the basis of errors or omissions.
- (c) Candidates may demonstrate their skills, knowledge and understanding at different points in their response. Marks should be awarded for relevant and appropriate skills, knowledge and understanding wherever they are demonstrated.
 - (i) For marks to be awarded, candidates' responses must relate to the context and demonstrate the skill required by the question.
 - (ii) In this question paper, the following command words are used:

- | | |
|----|----------|
| A: | Explain |
| B: | Evaluate |
| C: | Analyse |

For each command word, the following provides an overview of the marking principles. Refer to the Detailed Marking Instructions for further guidance on how these principles should be applied.

A. Questions that ask candidates to Explain...

Candidates should make points that relate to cause and effect and/or make the relationship between things clear in the context of the question.

Candidates may provide straightforward points of explanation, developed points, or a combination of these.

Up to the total mark allocation for the question:

- 1 mark should be awarded for each accurate, relevant point of explanation.
- 1 further mark should be awarded for any accurate, relevant development of that point.

B. Questions that ask the candidate to Evaluate...

Candidates should make points which make a judgment or determine the value of something based on criteria.

Candidates may provide straightforward points, developed points, or a combination of these.

Up to the mark allocation for the question:

- 1 mark should be awarded for each accurate, relevant evaluative point.
- 1 further mark should be awarded for any accurate, relevant development of that point.

C. Questions that ask the candidate to Analyse...

Candidates should identify appropriate points of information and the relationship(s) between the points or their significance when taken together.

The relationship(s) identified by the candidate will go beyond describing the points of information and should support a structured line of argument.

The relationship(s) between the points of information could include:

- similarities and consistency in the information
- contradictions and inconsistency in the information

Up to the mark allocation for the question:

- 1 mark should be awarded for each accurate, relevant point of analysis.
- 1 further mark should be awarded for any accurate, relevant development of that point.

Detailed Marking Instructions for each question

Question	Expected response	Max mark	Additional guidance
1	<p>Minerals could include:</p> <ul style="list-style-type: none"> calcium, phosphorus, iron, sodium <p>or any other mineral relevant to an identified stage of life</p> <p>Stages of life could include:</p> <ul style="list-style-type: none"> infants, young children, adolescents, adults, elderly <p>or any other correctly identified age span</p> <p>The explanation should include each of the following:</p> <ul style="list-style-type: none"> a function of an identified mineral relevant to an identified life stage the specific importance of the mineral in the diet of an individual at an identified stage in life 	10	<p>Candidates should make points that make clear the relationship(s) between a relevant function of the mineral and its importance to the identified life stage.</p> <p>Marks can be awarded for each point of explanation or development of a point of explanation. Developed points of explanation may refer to either a different function of the mineral or to a different life stage.</p> <p>For full marks, the candidate response must include at least two minerals and two life stages.</p> <p>A maximum of 4 marks can be awarded where one mineral and one life stage have been included.</p> <p>A maximum of 6 marks can be awarded where:</p> <ul style="list-style-type: none"> two minerals and one life stage have been included two life stages and one mineral have been included <p>There is no maximum number of minerals/stages of life to which the candidate could refer.</p> <p>Extracts from sample answers could include:</p> <p>Calcium is necessary for the development of bones and teeth, so is essential during adolescence when bone growth is rapid. <i>(1 mark for explanation of function, linked to a specified life stage)</i> 90% of peak bone mass is achieved in girls by age 18 and boys by age 20, so calcium intake is important to achieve the highest bone mass possible by this age. <i>(1 mark for development of explanation linked to the specified life stage)</i> After the age of 40, bone mass begins to be lost</p>

Question	Expected response	Max mark	Additional guidance
			<p>so a good intake of calcium is necessary to reduce the rate of loss and reduce the risk of osteoporosis. <i>(1 mark for explanation of function linked to a different life stage)</i> Beyond the age of 70, fracture risk increases significantly, so calcium is required to reduce the risk of fractures and aid healing when they occur <i>(1 mark for explanation of function linked to a third life stage)</i>.</p> <p>As a teenager's blood volume is increasing rapidly during periods of growth, an adequate intake of iron is necessary for the manufacture of sufficient red blood cells to avoid anaemia <i>(1 mark for explanation linked to a specified life stage)</i>.</p> <p>Calcium is necessary for the development of bones and teeth, so is essential for teenagers as their bones are growing rapidly, to reduce the risk of osteoporosis in later life. <i>(1 mark for explanation of function linked to a specified life stage.)</i> Phosphorus aids repair of bones after an injury, so is important for teenagers as they may be more at risk of broken bones as a result of taking part in outdoor activities and sports. <i>(1 mark for explanation of function of a different mineral linked to the same life stage.)</i> Phosphorus also contributes to the biomechanical mechanisms by which energy is obtained from food. This is important for teenagers who are often active. <i>(1 mark for developed explanation linked to the same mineral and life stage.)</i></p>
2	<p>Evaluative points should make a judgement:</p> <ul style="list-style-type: none"> on the use of the identified additive in food manufacturing, and its potential influence on the food manufacturing process <p>For full marks, candidates must refer to at least two types of additives in their response.</p>	10	<p>Candidates should make evaluative points related to the use of additives in the food manufacturing process.</p> <p>1 mark will be awarded for a point of evaluation or a development of a point of evaluation, up to a maximum of 6 marks for each type of additive.</p>

Question	Expected response	Max mark	Additional guidance
			<p>Marks can be awarded for each point or development of a point of evaluation relating to the use of the identified additive, wherever they appear in the candidate response.</p> <p>Candidates can be awarded marks in a number of ways:</p> <ul style="list-style-type: none"> • marks may be awarded for accurate evaluative points relating to each additive type • marks may be awarded for accurate evaluative comments relating to more than one type of additives taken together <p>Extracts from sample answers could include:</p> <p>The food manufacturer may choose to add a natural colouring such as beetroot to replace the colour lost during processing. The natural colouring may produce a product which will appeal to consumers who wish to avoid artificial additives. <i>(1 mark for point of evaluation of the function of colourings linked to the impact on the food manufacturing process.)</i> The cost of using natural colourings may increase the cost of manufacture of the product, putting the product price outwith the target cost and may reduce the potential market for the product. <i>(1 mark for developed point of evaluation linked to the same function.)</i></p> <p>The food manufacturer may use Sorbitol as a sweetener as it does not require insulin to be metabolised by the body to replace sugar in food products such as jams or confectionery. <i>(1 mark for point of evaluation linking the function of Sorbitol to the impact on the food manufacturing process.)</i> This may restrict the customer base to diabetics as others may avoid them, limiting sales. <i>(1 mark for developed point of evaluation linked to the same function.)</i></p>

Question	Expected response	Max mark	Additional guidance
3	<p>Evaluative points should make judgements on how:</p> <ul style="list-style-type: none"> • an identified marketing technique influences consumer food choices <p>Appropriate marketing techniques could include: positive health/ethical/environmental claims, celebrity endorsement, sponsorship of sporting/music events, games on company websites, competitions, vouchers/money off, or any other valid marketing technique linked to a potential impact on consumer food choice and/or the decision to purchase/repeat purchase.</p> <p>For full marks, candidates must refer to two marketing techniques in their response.</p>	10	<p>Candidates should make evaluative points related to the potential influence of marketing techniques on consumer food choices.</p> <p>1 mark will be awarded for a point of evaluation or a development of a point of evaluation, up to a maximum of 6 marks for each identified marketing technique.</p> <p>Marks can be awarded for each point or development of a point of evaluation relating to the identified marketing technique, wherever they appear in the candidate response.</p> <p>Extracts from sample answers could include:</p> <p>Some manufacturers use the technique of sponsoring sporting events to promote their products. If the food product is the only one of its type available at the event, consumers may be more likely to buy the food product as choice is limited. <i>(1 mark for judgement linked to consumer food choice.)</i> Where food companies sponsor a sporting event, consumers may be more likely to buy the food products to support the event. <i>(1 mark for judgement linked to the same marketing technique.)</i> However, many consumers feel that some food manufacturers' products are not healthy and do not contribute to the ethos of the event, so they may choose to avoid these. <i>(1 mark for judgement linked to the same marketing technique.)</i></p>
4	<p>Candidates may be awarded marks for responses that make appropriate references to:</p> <ul style="list-style-type: none"> • food choices of children (or made for them by their parents/guardians) • Scottish Dietary Goals / current dietary advice / local/national food initiatives / recommended nutritional intake for children data • social influences/factors • diet-related health issues affecting children • or any other relevant answer 	10	<p>Candidates should identify relevant points of information about possible consequences/implications for the health of children of their early experience of food, the relationship(s) between these points, and their significance when taken together.</p> <p>The relationship(s) between points of information could include:</p> <ul style="list-style-type: none"> • similarities and consistency in the information • contradictions and inconsistency in the information <p>1 mark will be awarded for a point of analysis or a development of a point of analysis.</p>

Question	Expected response	Max mark	Additional guidance
			<p>Extracts from sample answers could include:</p> <p>Children often eat large quantities of potatoes which could contribute to the child's intake of fibre. However, these are mostly as chips, roast potatoes and manufactured potato products where the potatoes have been peeled, so reducing the amount of fibre. <i>(1 mark for link between food intake and nutritional intake.)</i> Low fibre intake contributes to constipation in children which will increase the risk of bowel diseases, and evidence shows that bowel disease in children has risen sharply in recent years. <i>(1 mark for significance when taken together and impact on health)</i></p> <p>Many children eat less than the amount of fruit and vegetables recommended in the Revised Dietary Goals Scotland. <i>(1 mark for link between food intake and current dietary advice.)</i> Children from lower income families eat less fruit and vegetables than those from higher income groups, so increasing their risk of bowel disease. <i>(1 mark for link between a social factor and health.)</i></p>

[END OF SPECIMEN MARKING INSTRUCTIONS]