



National
Qualifications
SPECIMEN ONLY

S836/77/11

**Health and Food
Technology**

Date — Not applicable

Duration — 2 hours 30 minutes

Total marks — 50

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 8 3 6 7 7 1 1 *

Total marks — 50
Attempt ALL questions

MARKS

- | | |
|--|-----------|
| 1. (a) Discuss how food manufacturers can help consumers reduce food waste. | 10 |
| (b) Evaluate the techniques used by food manufacturers to persuade consumers to buy their products. | 10 |
| 2. Explain the role of minerals in the diet of the elderly. | 10 |
| 3. Analyse the potential impact of dietary guidance on the health of adolescents. | 10 |
| 4. Evaluate the role of product testing, a marketing plan and product launch on the development of a new food product. | 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

Always apply these general principles. Use them in conjunction with the detailed marking instructions, which identify the key features required in candidates' responses.

- (a) Always use positive marking. This means candidates accumulate marks for the demonstration of relevant skills, knowledge and understanding; marks are not deducted for errors or omissions.
- (b) If a candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your team leader.
- (c) Candidates may demonstrate their skills, knowledge and understanding at different points in their response. Award marks for relevant and appropriate skills, knowledge and understanding wherever they are demonstrated.
- (d) Award marks only where responses relate to the question asked. If candidates give points of knowledge without specifying the context, award marks unless it is clear that the points do not relate to the context of the question.

For **explain** questions candidates should make a number of points that relate to the cause and effect and/or make the relationship between things clear in the context of the question. They may provide a number of straightforward explanations or a smaller number of developed explanations, or a combination of these.

Up to the total mark allocation for this question

- **award 1 mark** for each accurate relevant point of reason
- **award a further mark** for any accurate relevant point that is developed from the same reason.

Example question: Explain the role of minerals in the diet of the elderly.

Example answer: Iron is required to create haemoglobin which is essential in the formation of red blood cells. This is important in the elderly as if they are deficient in iron it could cause them to become anaemic. (1 mark for an explanation which makes clear the relationship between the function of iron and the role specifically related to the elderly). This could result in them losing their independence as they will be too tired to take part in daily activities. (1 additional mark as response is linked to the same nutrient and further explains the function specifically related to the elderly)

For **discuss** questions candidates should make a number of points that communicate issues, ideas, or information about a given topic or context that will make a case for and/or against. It is not always necessary for candidates to give both sides of the debate in responses.

Up to the total mark allocation for this question

- **award 1 mark** for each accurate point of knowledge that is clearly relevant
- **award 1 mark** for any further development of a relevant point, including exemplification or a conclusion where appropriate.

Example question: Discuss how food manufacturers can help consumers reduce food waste.

Example answer: Food manufacturers can help consumers reduce food waste in a number of ways. One way is in relation to food packaging as most pre-packed foods have detailed storage advice. Many manufacturers are highlighting this on the front of packs, for example most fresh

produce should be stored in the fridge. This can help consumers reduce waste as the advice is more readily accessible to them and so should ensure the food is stored in a way that keeps it at optimum quality. (1 mark for accurate relevant point of discussion linked to how the food manufacturer can help the consumer reduce food waste) In addition to this, manufacturers are now moving away from 'freeze on day of purchase' guidance to 'freeze before the use-by-date', which means if food isn't eaten when expected it can be frozen before the use-by-date. This also should help to reduce waste. (1 further mark for development of discussion point)

For **evaluate** questions candidates should make a number of points which make a judgement and determine the value of something based on the criteria provided in the question. They may provide a number of straightforward points or a smaller number of developed points, or a combination of these.

Up to the total mark allocation for this question

- award 1 mark for each accurate, relevant evaluative point
- award a further mark for any accurate, relevant development of that point.

Example question: Evaluate the role of product testing, a marketing plan and product launch on the development of a new food product.

Example answer: The manufacturer could conduct a pilot launch which will be beneficial as they could pilot the new product in a place where it is highly populated with their target market, giving them an indication of how well their product is selling and whether they need to make any adjustments prior to full launch. (1 mark for evaluative comment) If the pilot launch is successful, the manufacturer may choose to launch the product globally or nationally as they are confident it will sell well. (1 additional mark for developed point linked to the previous point)

For **analyse** questions candidates should identify/describe/explain relevant parts, and the relationship between the parts and/or the whole. Candidates should be able to draw out and relate any implications and/or analyse data.

Up to the total mark allocation for this question

- award 1 mark for each accurate, relevant point of analysis
- award a further mark for any accurate, relevant development of that point.

Example question: Analyse the influence of food packaging and labelling on consumer choice.

Example answer: Food packaging that protects a product from breaking or spilling could encourage a consumer to buy that product over other brands' products. This is because if the consumer has to travel home in the car or by walking they will not want the product to spill or make a mess. (1 mark as the candidate clearly identifies 'breaking and spilling' as a relevant point of information on food packaging and was able to clearly analyse the significance of this on consumer food choice) This however may put some consumers off buying a product as they may want to be environmentally friendly and not choose packaging that cannot be recycled. (1 additional mark for developed point linked to previous point)

Marking instructions for each question

Question		Expected response	Max mark	Additional guidance
1.	(a)	<p>Possible responses could include</p> <ul style="list-style-type: none"> • food manufacturers can help consumers reduce food waste in a number of ways. One way is in relation to food packaging as most pre-packed foods have detailed storage advice. Many manufacturers are highlighting this on the front of packs, for example most fresh produce should be stored in the fridge. This can help consumers reduce waste as the advice is more readily accessible to them and so should ensure the food is stored in a way that keeps it at optimum quality. (1 mark for accurate relevant point of discussion linked to how the food manufacturer can help the consumer reduce food waste) In addition to this, manufacturers are now moving away from ‘freeze on day of purchase’ guidance to ‘freeze before the use-by-date’, which means if food isn’t eaten when expected it can be frozen before the use-by-date. This also should help to reduce waste. (1 further mark for development of discussion point) • food manufacturers may choose to use Modified Atmosphere packaging (MAP) as this type of packaging slows down the growth of bacteria and micro-organisms. As modified atmosphere products will have a longer shelf life, consumers may choose these as the product can be stored at home for longer (1 mark for accurate relevant point of discussion linked to how the food manufacturer can help the consumer reduce food waste) so allowing them to shop less frequently. This may increase sales for the manufacturer. (1 further mark for development of discussion point) 	10	<p>Candidates should make a number of points that communicate issues, ideas, or information in relation to how manufacturers can help consumers reduce food waste.</p> <p>Candidates do not need to give both sides of the debate in their responses.</p> <ul style="list-style-type: none"> • award 1 mark for each accurate point of knowledge that is clearly relevant • award a further mark for any development of a relevant point, including exemplification or a conclusion where appropriate. <p style="text-align: right;"><i>(up to a maximum of 10 marks)</i></p>

Question	Expected response	Max mark	Additional guidance
	<ul style="list-style-type: none"> cooking too much food is one of the main causes of food waste. Food manufacturers often provide measuring tools on their packaging, for example packaged rice often indicates portion sizes on a transparent window in the packaging to allow the consumer to decant and cook only the number of portions required so reducing food waste. (1 mark for accurate relevant point of discussion linked to how the food manufacturer can help the consumer reduce food waste) <p>Or any other valid response.</p>		
(b)	<p>Possible responses could include</p> <ul style="list-style-type: none"> food manufacturers often use celebrities to endorse their products. This will have a positive effect on sales for the manufacturer as it is thought that consumers are more likely to purchase an item which is supported by someone who they can relate to. (1 mark for relevant evaluative point linked to techniques food manufacturers use to persuade consumers to buy their products) However, many food products endorsed by celebrities are high in fat and sugar so are more likely to encourage consumers to choose products which are unhealthy for them. (1 further mark for relevant developed point linked to the same technique used by food manufacturers) food manufacturers often use in-store tasting sessions to promote or advertise a product. This is beneficial to the food manufacturer as it allows the consumer to try their product before they buy it. If they like the product they will hopefully go on to buy it and this will help to increase sales for the manufacturer. (1 mark for relevant evaluative point linked to techniques food manufacturers use to persuade consumers to buy their products) However, this may not reach a large amount of consumers because if they do not use that particular store they will not be exposed to the product. Therefore this may not be a suitable technique used by the food manufacturer. (1 further mark for relevant developed point linked to the same technique used by food manufacturers) 	10	<p>Candidates should make points which make a judgement or determine the value of something based on the impact the techniques used by food manufacturers have on persuading consumers to buy their products.</p> <p>Candidates may provide straightforward points, developed points, or a combination of these.</p> <ul style="list-style-type: none"> award 1 mark for each accurate, relevant evaluative point award a further mark for any accurate, relevant development of that point. award a maximum of 9 marks for any one technique used by food manufacturers. <p><i>(up to a maximum of 10 marks)</i></p>

Question	Expected response	Max mark	Additional guidance
	<ul style="list-style-type: none"> • food manufactures may advertise their product at the time when their target market is most likely to be watching television, for example snack food may be advertised during a sports event. This should hopefully be beneficial to the manufacturer as snacks are often eaten when watching sports, and therefore may increase sales of the product for the manufacturer. (1 mark for relevant evaluative point linked to techniques food manufacturers use to persuade consumers to buy their products) However, TV advertising can be expensive as it is designed to reach a large audience and if the advert does not target the appropriate market, it may not create enough sales for the manufacturer to recoup the expense. (1 further mark for relevant developed point linked to the same technique used by food manufacturers) <p>Or any other valid response.</p>		

Question	Expected response	Max mark	Additional guidance
2.	<p>Possible responses could include</p> <ul style="list-style-type: none"> • iron is required to create haemoglobin which is essential in the formation of red blood cells. This is important for the elderly as if they are deficient in iron it could cause them to become anaemic. (1 mark for an explanation which makes clear the relationship between the function of iron and the role specifically related to the elderly) This could result in them losing their independence as they will be too tired to take part in daily activities. (1 further mark as response is a development of the same nutrient and further explains the function specifically related to the elderly) • calcium is necessary for the formation of strong bones. As bone density decreases with age, an adequate intake of calcium is necessary for the elderly to reduce the risk of osteoporosis. (1 mark for an explanation which makes clear the relationship between the function of calcium and the role specifically related to the elderly) After the age of 70, fracture risk increases significantly, so calcium is required to reduce the risk of fractures and aid healing if they occur. (1 further mark as response is a development of the same nutrient and further explains the function specifically related to the elderly) • calcium is also required for blood clotting which could be important in the elderly as they may be more at risk of falling. Effective blood clotting could prevent excessive blood loss. (1 mark for an explanation which makes clear the relationship between a different function of calcium and the role specifically related to the elderly) • phosphorus aids repair of bones after an injury, so is important for the elderly as they may be more at risk of broken or fractured bones as a result of osteoporosis. (1 mark for an explanation which makes clear the relationship between the function of phosphorous and the role specifically related to the elderly) <p>Or any other valid response.</p>	10	<p>Candidates should make a number of points that relate to the cause and effect and/or make the relationship between things clear in relation to the role of minerals in the diet of the elderly.</p> <p>Candidates may provide a number of straightforward explanations, developed points, or a combination of these.</p> <p>Up to the total mark allocation for the question</p> <ul style="list-style-type: none"> • award 1 mark for each accurate, relevant point of explanation • award 1 further mark for any accurate, relevant development of that point • award a maximum of 9 marks if candidates only refer to one mineral. <p style="text-align: right;"><i>(up to a maximum of 10 marks)</i></p>

Question	Expected response	Max mark	Additional guidance
3.	<p>Possible responses could include</p> <ul style="list-style-type: none"> the revised dietary goals for Scotland advise a reduction in calorie intake by 120 kcal per day. The potential impact of this would be a reduction in obesity in adolescents, particularly those who are not very active. However, if adolescents do not follow this guidance, excess energy will be stored as fat increasing risk of weight gain or obesity. (1 mark for relevant point of analysis demonstrating the relationship between dietary guidance and potential impact on the health of adolescents) the Eatwell Guide suggests that beans, peas and lentils are good alternatives to meat because they are lower in fat. This could reduce the risk of weight gain in adolescents, if consumed as an alternative to high fat foods regularly. (1 mark for relevant point of analysis demonstrating the relationship between different dietary guidance and potential impact on the health of adolescents) These foods are also high in fibre, therefore hopefully preventing constipation in adolescents. (1 further mark for development of the above point of analysis) <p>Or any other valid response.</p>	10	<p>Candidates must demonstrate the ability to identify, describe and explain the potential impact of dietary guidance on the health of adolescents, and the relationship between this.</p> <ul style="list-style-type: none"> award 1 mark for each accurate, relevant point of analysis award 1 further mark for any accurate, relevant development of that point. <p><i>(up to a maximum of 10 marks)</i></p>
4.	<p>Possible responses could include</p> <ul style="list-style-type: none"> the food manufacturer could conduct a pilot launch which will be beneficial for the manufacturer as they could pilot the new product in a place where it is highly populated with their target market, giving them an indication of how well their product is selling and whether they need to make any adjustments prior to full launch. (1 mark for relevant evaluative point linked to pilot launch) If the pilot launch is successful, the manufacturer may choose to launch the product globally or nationally as they are confident it will sell well (1 further mark for relevant developed point linked to the same area of product development) 	10	<p>Candidates should make points which make a judgement or determine the value of something based on the role of product testing, a marketing plan and product launch on the development of a new food product.</p> <p>Candidates may provide straightforward points, developed points, or a combination of these.</p> <ul style="list-style-type: none"> award 1 mark for each accurate, relevant evaluative point award a further mark for any accurate, relevant development of that point

Question	Expected response	Max mark	Additional guidance
	<ul style="list-style-type: none"> the food manufacturer could use product testing, for example by using sensory testing to establish opinion on a variety of characteristics of the product. This will be beneficial as it will give results for specific attributes which can be altered according to the results, therefore allowing the manufacturer to develop a more refined product to increase sales. (1 mark for relevant evaluative point linked to product testing) However, it may take time to carry out the testing and collate results as well as manufacture the refined product which could cost the manufacturer more money so reducing profits. (1 further mark for relevant developed point linked to the same area of product development) <p>Or any other valid response.</p>		<ul style="list-style-type: none"> award a maximum of 8 marks for any one role which is evaluated. <p><i>(up to a maximum of 10 marks)</i></p>

[END OF SPECIMEN MARKING INSTRUCTIONS]