



National  
Qualifications  
2025

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# 2025 Health and Food Technology

## Advanced Higher

### Question Paper Finalised Marking Instructions

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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 that 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 ensures 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 that 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 which is made up of:
  - an **accurate fact** about a need of individuals with allergies and intolerances
  - a **further fact which agrees or disagrees** with the initial fact and demonstrates a way that food manufacturers/retailers are meeting the specified need
  - an **impact** on individuals with food allergies and intolerances.
  - a **further fact which agrees or disagrees** with the initial fact and demonstrates a way that food manufacturers/retailers are meeting the specified need
  - an **impact** on individuals with food allergies and intolerances
  - award **1 further mark** for any accurate, relevant development of that point

**Example question** – Analyse ways food manufacturers and retailers are meeting the needs of individuals with food allergies and intolerances.

**Example answer** – Individuals with allergies or intolerances are unable to consume products which include the ingredient they are allergic or intolerant to, for example, those with a dairy allergy/intolerance cannot consume cow's milk products. (**An accurate fact about individuals with allergies and intolerances.**) Manufacturers are meeting the needs of these individuals by producing allergen friendly versions of products, for example, non-dairy milk alternatives such as oat milk. (**A further fact stating a way in which manufacturers are meeting the need identified.**) Therefore, increasing food choice for these individuals (**An impact on individuals with food allergies and intolerances.**) (**1 Mark for relevant point of analysis**, which shows a need required by individuals with allergies and intolerance with accurate facts linked to ways manufacturers/retailers are meeting these needs.) Also, manufacturers often fortify these products with nutrients that would be naturally present in the allergen containing product, for example, oat milk fortified with calcium/Vitamin B12 that would usually be found in cow's milk so ensuring individuals avoid nutritional deficiencies due to their allergy/intolerance. (**1 further mark** for a development of the same point analysis.)

Marking instructions for each question

Question		Expected response	Max mark	Additional guidance
1.	(a)	<p><b>Discuss ways in which food manufacturers and supermarkets may help consumers meet Current Dietary Advice.</b></p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> <li>supermarkets are advertising meal deals that often include snacks like crisp which are high in salt, so increasing the salt intake of the consumer which does not help in meeting current dietary advice of <b><i>Average intake of salt to reduce to 6g per day.</i></b> (1 mark for relevant point of discussion which is linked to an accurate piece of CDA, the supermarket and the consumer) However, many supermarkets include as part of their meal deal sandwiches made with wholegrain bread or wraps, so making it easier for the consumer to meet their current dietary advice of <b><i>increase in average consumption fibre for adults to 30g/day</i></b> (1 further mark for relevant developed point linked to the supermarkets and a different accurate piece of CDA)</li> <li>some consumers may live in rural areas and so access to bigger supermarkets with more variety of fresh fruit and vegetables may be a challenge so this would mean that the choice at the local shop is limited, and therefore does not help the consumer <b><i>increase their fruit and vegetable intake (to 400g daily.)</i></b> (1 mark for relevant point of discussion which is linked to an accurate piece of CDA, the supermarket and the consumer). Furthermore, purchasing fruit and vegetables at local shops in rural areas may mean the consumer needs to pay more and this would not enable them to purchase the produce due to lower incomes and so will not be able to meet the recommended portion of fruit and vegetables. (1 further mark for relevant developed point linked to the supermarkets and a same accurate piece of CDA)</li> <li>food manufacturers are making more products which are marketed at being lower in fat, e.g. reduced fat yoghurt, this is helpful for consumers as it gives them more choice and can contribute towards them meeting the current dietary advice of <b><i>Average intake of total fat to reduce to no more than 35% food energy.</i></b> (1 mark for relevant point of discussion which is linked to an accurate piece of CDA, the food manufacturer and the consumer). However, lower fat alternatives can sometimes be more expensive so consumers may choose not to</li> </ul>	10	<p>Candidates should make several points that communicate issues, ideas, or information in relation how food manufacturers and/or supermarkets are helping consumers to meet specific current dietary advice.</p> <p>Candidates do not need to give both sides of the debate in their responses.</p> <ul style="list-style-type: none"> <li>award 1 mark for each accurate point of discussion which is linked to an accurate piece of current dietary advice and the food manufacturer/supermarket helping the consumer</li> <li>award 1 further mark for any development of a discussion point</li> <li>award a maximum of 9 marks if candidates only refer to one piece of current dietary advice no marks will be awarded if the current dietary advice is inaccurate</li> </ul> <p>(Up to a maximum of 10 marks)</p>

Question			Expected response	Max mark	Additional guidance
			<p>but these products as they are not affordable so would not help towards meeting the CDA of <i>reducing total fat intake to no more than 35% of food energy</i>.  <b>(1 further mark</b> for relevant developed point linked to the consumer and a same accurate piece of CDA)</p> <p><b>Or any other valid response.</b></p>		

Question	Expected response	Max mark	Additional guidance
(b)	<p><b>Evaluate the effects on health of a diet high in fat, sugar and salt for an adult.</b></p> <p>Possible responses may include:</p> <ul style="list-style-type: none"> <li>• fat forms a layer under the skin that can be insulating and keeps an adult warm , and so this is beneficial as it regulates the body temperature to ensure that their internal climate is controlled (1 mark for accurate relevant point of evaluation linked to fat in the diet of an adult). Similarly, this layer of fat can also be used to protect vital organs like the heart and kidney against injury if the adult is in an accident. (1 further mark for relevant developed point linked to the same fact about fat)</li> <li>• fat is a concentrated source of energy that if not burnt off by activity will not benefit the adult as it will be stored as fat and contribute to weight gain. (1 mark for accurate relevant point of evaluation linked to fat in the diet of an adult). However, if an adult is taking part in exercise, then fat provides the energy necessary to ensure the individual can perform and their best without being fatigued. (1 further mark for relevant developed point linked to the same fact about fat)</li> <li>• sugar can cause dental decay as bacteria present in the mouth use the sugar to produce acid which destroys the enamel of the teeth and so this will not benefit an adult with poor dental hygiene is at more at risk of mouth pain and tooth loss/dental caries (1 mark for accurate relevant point of evaluation linked to fat in the diet of an adult)</li> <li>• sugar is a concentrated source of energy and so is high in calories therefore this is not good for an adult as if this excess energy is not used up, it will contribute towards obesity. (1 mark for accurate relevant point of evaluation linked to sugar in the diet of an adult). As sugar could contribute towards obesity, this may cause strain on the heart and leads to high blood pressure in some individuals (1 further mark for relevant developed point linked to the same fact about sugar)</li> <li>• salt is essential in the diet of an adult as it helps to maintain the water/fluid balance in the body and this benefits adults who have a high activity level as it prevents muscular cramps during exercise. (1 mark for accurate relevant point of evaluation linked to salt in the diet of an adult)</li> </ul> <p><b>Or any other valid response.</b></p>	10	<p>Candidates should make points which make a judgement or determine the how a diet high in fat, sugar and salt can affect the health of an adult.</p> <p>Candidates may provide straightforward points, developed points, or a combination of these.</p> <ul style="list-style-type: none"> <li>• award 1 mark for each accurate, relevant evaluative point</li> <li>• award a further mark for any accurate, relevant development of that point</li> <li>• award a maximum of 8 marks if candidates only refer to fat, sugar or salt</li> </ul> <p style="text-align: right;">(Up to a maximum of 10 marks)</p>

Question	Expected response	Max mark	Additional guidance
2.	<p><b>Analyse ways in which socio-economic factors can influence consumer choice of food.</b></p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> <li>• consumers with limited education and knowledge may lack the skills on how to prepare healthy meals that are nutritionally beneficial to them, (an accurate fact about the socio-economic factor education)</li> <li>• therefore, they may select convenience or processed foods high in fat, sugar and salt and low in fibre (a further fact stating a way in which socio-economic factor education influences consumer food choice)</li> <li>• increasing their risk of dietary illness such as hypertension and coronary heart disease. (An impact on consumer with poor education/knowledge/skills) (1 mark for relevant point of analysis)</li> <li>• also, a consumer who struggles to have the skill of budgeting may find it difficult to manage their disposable income and therefore may not leave enough money available for nutritious food (1 further mark for a development of the same point of analysis)</li> <li>• consumers with a low income may be restricted by the range of foods they can purchase and only buy the basics to feed themselves (an accurate fact about the socio-economic factor income)</li> <li>• this may mean they miss out on luxury goods or fresh fruit and vegetables/food products such as fruit and vegetables and red meat that costs more (a further fact stating a way in which socio-economic factor income influences consumer food choice)</li> <li>• and therefore, their diet can lack variety. (An impact on consumer with limited income) (1 mark for relevant point of analysis)</li> <li>• however, some consumers that tend to have a higher income/more expendable income can spend more of their money on eating out or purchasing luxury goods and so this means that they have more variety in their diet/may eat foods higher in fat, sugar and salt so making their diet unhealthy (1 further mark for a development of the same point of analysis)</li> <li>• consumers who have a very demanding (work/shift workers) schedule may not have the time to prepare dinner after work (an accurate fact about the socio-economic factor lifestyle)</li> </ul>	10	<p>Candidates must demonstrate the ability to identify, describe and explain the impact on consumer food choice by socio-economic factors, such as; budget, lifestyle, health, culture and education and the relationship between this.</p> <p><b>Award 1 mark</b> for each accurate, relevant point of analysis which is made up of:</p> <ul style="list-style-type: none"> <li>• <b>an accurate fact</b> about the socio-economic factor. (the initial fact)</li> <li>• <b>a further fact</b> which agrees or disagrees with the initial fact</li> <li>• an impact on the consumer and their food choice linked to the socio-economic factor identified.</li> <li>• award <b>1 further mark</b> for any accurate, relevant development of that point</li> <li>• award a <b>maximum of 9 marks</b> if candidates only refer to one socio-economic factor</li> </ul> <p>(up to a maximum of 10 marks)</p>

Question			Expected response	Max mark	Additional guidance
			<ul style="list-style-type: none"> <li>• and so rely on cook – chill meals as these are convenient and easy to prepare more (a further fact stating a way in which socio-economic factor income influences consumer food choice)</li> <li>• therefore, ensuring the consumer has a filling meal at the end of their workday. (1 mark for relevant point of analysis)</li> <li>• similarly, consumers who have a demanding lifestyle with limited time may choose to do their shopping online from the comfort of their home, therefore saving them time to carry out other activities. (1 further mark for a development of the same point of analysis)</li> </ul> <p>Or any other valid response.</p>		

Question	Expected response	Max mark	Additional guidance
3.	<p><b>Explain the role of food additives in the food manufacturing process.</b></p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> <li>• food manufacturers use emulsifiers to prevent the separation of the component's ingredients in a food product for example in the manufacturing of mayonnaise, therefore maintaining the physical appearance of a product <b>(1 mark</b> for an explanation which makes clear the relationship between an emulsifier and its use in food manufacture)</li> <li>• emulsifiers can be added to a food product to lower the amount of fat needed in the manufacture of some baked goods, and so this makes the product more suitable for consumers who may be on calorie restricted diets <b>(1 mark</b> for an explanation which makes clear the relationship between an emulsifier and its use in food manufacture)</li> <li>• food manufacturers use preservatives allow food products to have a longer shelf life as they do not deteriorate as quickly, and so consumers do not need to shop as regularly, saving them time. <b>(1 mark</b> for an explanation which makes clear the relationship between a preservative and its use in food manufacture). In addition, as the shelf life is extended preservatives delay micro-organisms wasting food so resulting in less food waste <b>(1 further mark</b> for the development of a point about preservatives)</li> <li>• colourings can be added to replace the natural colours lost in products during the food manufacturing process, this may be beneficial as they can help food products look more appealing which may encourage more consumers to try the product. <b>(1 mark</b> for an explanation which makes clear the relationship between colourings and its use in food manufacture)</li> </ul> <p><b>Or any other valid response.</b></p>	10	<p>Candidates should make several points that relate to the cause and effect and/or make the relationship between things clear in relation to the role of food additives in the food manufacturing process.</p> <p>Candidates may provide several straightforward explanations, developed points, or a combination of these. Up to the total mark allocation for the question.</p> <ul style="list-style-type: none"> <li>• award <b>1 mark</b> for each accurate, relevant point of explanation</li> <li>• award <b>1 further mark</b> for any accurate, relevant development of that point</li> <li>• award a <b>maximum of 9 marks</b> if candidates only refer to one food additive</li> </ul> <p style="text-align: right;">(up to a maximum of 10 marks)</p>

Question	Expected response	Max mark	Additional guidance
4.	<p><b>Evaluate the impact of genetically modified food, Fair Trade and seasonality for the consumer.</b></p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> <li>altering the genetic makeup of a plant means that fewer crops are lost as crops become more resistant to some disease/pests and this is good as this means that there is a greater yield to feed the consumer growing population (<b>1 mark</b> for relevant evaluative point linked to how Genetic Modification impacts the consumer), however many consumers are concerned that new genes incorporated into the crop could ‘escape’ and cause cross pollination and transfer to other species with unknown consequences (<b>1 further mark</b> for developed evaluative point linked to Genetic Modification)</li> <li>consumers may choose genetically altered food products as they tend to have a longer shelf life as the product has been altered to have ripening delayed and this is good as there will be less food waste for the consumer/better quality of product (<b>1 mark</b> for relevant evaluative point linked to how Genetic Modification impacts the consumer), similarly, consumers who have allergies to food additives may choose to purchase GM fruit instead as they are at less risk of a reaction (<b>1 further mark</b> for developed evaluative point linked to Genetic Modification)</li> <li>purchasing Fairtrade foods help to improve the wages and working conditions of workers in third world countries and this is good as consumers will be more encouraged to buy the products as they feel they are helping those less fortunate than themselves, (<b>1 mark</b> for relevant evaluative point linked to how Fairtrade foods impacts the consumer) however as above market prices can be paid for some food products, this is not always beneficial to the consumer as it can raise the price of the food product, therefore preventing the consumer from purchasing the product as they cannot afford it (<b>1 further mark</b> for developed evaluative point linked to Fairtrade foods)</li> </ul>	10	<p>Candidates should make several points that relate to the cause and effect and/or make the relationship between things clear in relation to the impact of genetically modified food, Fair Trade and seasonality for the consumer.</p> <p>Candidates may provide several 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"> <li>award <b>1 mark</b> for each accurate, relevant point of explanation linked to either genetically modified food, Fair Trade and seasonality for the consumer</li> <li>award <b>1 further mark</b> for any accurate, relevant development of that point</li> <li>award a <b>maximum of 8 marks</b> if candidates only refer to only genetically modified food, Fair Trade or seasonality</li> </ul> <p>(up to a maximum of 10 marks)</p>

Question			Expected response	Max mark	Additional guidance
			<ul style="list-style-type: none"> <li>buying food that is in season means it is likely at its peak in terms of flavour – eg strawberries in summer. This benefits the consumer by providing produce that tastes better. (1 mark for relevant evaluative point linked to how seasonality impacts the consumer.) When produce is in abundance due to being in season, prices typically drop, this is beneficial to the consumer as it makes the produce more affordable. (1 mark for relevant evaluative point linked to how seasonality impacts the consumer)</li> </ul> <p>Or any other valid response.</p>		

[END OF MARKING INSTRUCTIONS]