



National
Qualifications
2024

2024 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>Discuss marketing techniques used by food manufacturers when promoting their products to consumers.</p> <p>Possible responses could include:</p> <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, eg, snack food may be advertised during a sports event. As snacks are often eaten when watching sports, this may increase sales of these for the manufacturer. (1 mark for accurate relevant point of discussion linked to an appropriate marketing technique and food manufacturer) TV advertising can be expensive as it reaches a large audience. If the audience does not contain enough of the target 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 marketing technique and food manufacturer) • consumers, particularly children, are more likely to buy a food product which is endorsed by a celebrity than other brands of the same food. Food manufactures that use celebrities in their advertising may be more likely to increase sales (1 mark for accurate relevant point of discussion linked to an appropriate marketing technique and food manufacturer) • food manufacturers often use in store tasting sessions to promote or advertise a product. This allows the consumer to try the product and if they like it, to go on to buy it, increasing sales for the manufacturer (1 mark for accurate relevant point of discussion linked to an appropriate marketing technique and food manufacturer) 	10	<p>Candidates should make several points that communicate issues, ideas, or information in relation to the marketing techniques used by food manufacturers when promoting their products to consumers.</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 discussion that is which is linked to an appropriate marketing technique and the food manufacturer • award 1 further mark for any development of a discussion point • award a maximum of 9 marks if candidates only refer to one marketing technique. <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 manufacturers may have a dedicated social media team to market their products across lots of social media platforms, this will mean that the product will reach a large number of people, this will hopefully be beneficial to the manufacturer as it will encourage people to try the product, therefore potentially increasing sales. (1 mark for accurate relevant point of discussion linked to an appropriate marketing technique and food manufacturer). <p>Or any other valid response.</p>		

Question	Expected response	Max mark	Additional guidance
(b)	<p>Analyse impact of current dietary advice for food manufacturers when developing new food products.</p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> • food manufacturers may choose to develop a new food product containing oil rich fish (eg salmon fingers) this will help to meet the current dietary advice of increasing oil rich fish to 140g per week (the initial fact which is linked to new food product development and supported by accurate current dietary advice) • this is because oil rich fish contains omega 3 fatty acids which can help reduce the risk of blood clots (the further fact which supports the initial fact) • the impact of this to the manufacturer is that they may need to find a new supplier to provide the oily fish (the impact on the food manufacturer) (award 1 mark for relevant point of analysis) • this may mean that it may cost more to produce the product (award 1 further mark for development of the point) • the food manufacturer may choose to develop a new lower salt ready meal to help meet the current dietary advice of reducing salt intake to no more than 6g per day (the initial fact which is linked to new food product development and supported by accurate current dietary advice) • this can be done by replacing the salt with herbs or spices to enhance the flavour (the further fact which supports the initial fact) • this may impact the food manufacturer as they will need to change the ingredients list on the food label. (the impact on the food manufacturer) (award 1 mark for relevant point of analysis) • this may come as an extra cost to the manufacturer as they will have to change the packaging. (Award 1 further mark for development of the point) <p>Or any other valid response.</p>	10	<p>Candidates must demonstrate the ability to identify, describe and explain the impact of current dietary advice for food manufacturers when developing new products.</p> <p>Award 1 mark for each accurate, relevant point of analysis which is made up of:</p> <ul style="list-style-type: none"> • a link to new food product development supported by accurate current dietary advice (the initial fact) • a further fact which agrees or disagrees with the initial fact • an impact on the food manufacturer. <ul style="list-style-type: none"> • award 1 further mark for any accurate, relevant development of that point • award a maximum of 9 marks if candidates only refer to one way • no marks will be awarded if the current dietary advice is inaccurate or not stated in its entirety. <p style="text-align: right;">(up to a maximum of 10 marks)</p>

Question	Expected response	Max mark	Additional guidance
2.	<p>Evaluate environmental issues which may influence consumer choice of food.</p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> • environmental issues could include organic produce as no chemical fertilisers are used in production of food which is beneficial as it would encourage environmentally aware consumers to purchase them. (1 mark for relevant point of evaluation linked to how organic produce can influence consumer choice of food). However, organic produce is more expensive to purchase so low-income consumers may not be able to afford them so may limit food choice (1 mark for relevant developed point of evaluation linked to the same issue) • environmental issues could include food miles which indicate the number of miles food has travelled from where it is produced to our homes which may positively tempt consumers who care for the environment to choose local foods which have low food miles. (1 mark for relevant point of evaluation linked to how food miles can influence consumer choice of food). Nevertheless, this can narrow food choice as not all foods are produced locally so some consumers may choose foods with high food miles to increase their food choice. (1 mark for relevant developed point of evaluation linked to same issue) <p>Or any other valid response.</p>	10	<p>Candidates should make points which make a judgement or determine the value of environmental issues which may influence consumer choice of food.</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 8 marks if candidates only refer to one environmental issue. <p style="text-align: right;">(Up to a maximum of 10 marks)</p>

Question	Expected response	Max mark	Additional guidance
3.	<p>Explain the importance of minerals in the diet of an adolescent.</p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> • calcium is necessary in adolescents to ensure maximum bone density during periods of rapid growth. This is important for adolescents to reduce risk of osteoporosis in later life. (1 mark for an explanation which makes clear the relationship between the function of calcium and role specifically related to adolescents). Osteoporosis is a diet related condition caused by a lack of calcium where bones become porous so more likely to fracture. (1 further mark for development of explanation of function, linked to condition). Vitamin D controls the absorption of calcium so there must be a good supply in an adolescent`s diet (or exposure to sunlight) to allow the adolescent to make use of calcium in food (1 further mark for development of explanation linked to calcium and the adolescent) • sodium is essential for the correct balance of body fluids which allows an adolescent to maintain their water balance in the body (1 mark for an explanation which makes clear the relationship between the function of sodium and role specifically related to adolescents). If an active adolescent takes part in strenuous exercise, large amounts of sodium may be lost through sweating so increasing risk of muscular cramps so important to have adequate sodium in their diet (1 further mark for development of explanation of function of sodium, linked to adolescent and condition) However, adolescents tend to have a taste for salty/sodium foods so it is important they do not consume an excess as can narrow arteries and increase risk of hypertension in later life (1 further mark for development of explanation linked to sodium and the adolescent) 	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 minerals in the diet of adolescents.</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"> • 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;">(up to a maximum of 10 marks)</p>

Question			Expected response	Max mark	Additional guidance
			<ul style="list-style-type: none"> iron is necessary for an adolescent to produce sufficient red blood cells/haemoglobin to reduce risk of anaemia (1 mark for an explanation which makes clear the relationship between the function of iron and role specifically related to adolescents). This will prevent tiredness/breathlessness during their daily activities (1 further mark for development of explanation of function of iron, linked to adolescent and condition). This also helps to prevent loss of concentration at school so should improve focus for the adolescent (1 further mark for development of explanation linked to iron and the adolescent) <p>Or any other valid response.</p>		

Question	Expected response	Max mark	Additional guidance
4.	<p>Evaluate the role of product testing, marketing plan and product launch on the development of a new product.</p> <p>Possible responses could include:</p> <ul style="list-style-type: none"> • a food manufacturer would carry out product testing to test a number of attributes/characteristics of the new product. This will give results for specific attributes which can be altered according to testers opinion to develop a more refined product to meet sales targets (1 mark for relevant evaluative point linked to product testing). As 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 evaluative point linked to the same area of product development) • a food manufacturer would carry out a marketing plan to raise awareness of the new product by offering special promotions, eg, Buy One Get One Free. This would encourage consumers to purchase the new product as they feel they are receiving value for money so would encourage sales. (1 mark for relevant evaluative point linked to marketing plan). However, if the consumer does not need a second food product, eg, a second birthday cake this can result in food waste (1 further mark for relevant developed point of evaluation linked to the same area of product development) 	10	<p>Candidates should make points which make a judgement or determine the value of the role of product testing, marketing plan and product launch on the development of a new 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 • award a maximum of 8 marks if candidates only refer to one stage of the food product development process. <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"> a food manufacturer would carry out product launch by launching the new product on a small scale in an identified supermarket across different regions of the country rather than in one region. This will give a more accurate indication of which regions the product is popular so can be rolled out in other supermarkets in similar regions to meet sales targets (1 mark for relevant evaluative point linked to product launch). This could allow competitors to see the new product and give them inspiration and time to develop a similar product so may take away sales from the manufacturer so reducing profit. (1 further mark for relevant developed point of evaluation linked to the same area of product development) <p>Or any other valid response.</p>		

[END OF MARKING INSTRUCTIONS]