



National
Qualifications
2022

2022 Health and Food Technology

Advanced Higher

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
- 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.	<p>Possible responses could include:</p> <ul style="list-style-type: none"> at the stage of concept screening, the food manufacturer screens all ideas from concept generation for feasibility which is beneficial as it allows the manufacturer to carry forward the best ideas and develop a specification for a new food product (1 mark for relevant evaluative point linked to concept screening). The drawing up of the specification is a positive step as it allows the manufacturer to eliminate ideas that may be costly or difficult to process for example so helps to develop a commercially viable product (1 further mark for relevant developed point linked to the same area of product development). Furthermore, it then allows new product ideas which meet the specification to be generated so that a prototype can be developed which is good to allow the manufacturer to see what the new product actually looks like (1 further mark for relevant developed point linked to the same area of product development) at the stage of prototype production the food manufacturer develops a specimen of the new product in a test kitchen which is beneficial to measure it against the specification to check for commercial viability (1 mark for relevant evaluative point linked to prototype production). The food manufacturer then uses a small team to sensory test the product for specific attributes and appeal and modifications can be made if necessary. This will be useful to allow the manufacturer to develop a more refined product for product testing on a larger scale to the target market. (1 further mark for relevant developed point linked to same area of product development). However, the small team of testers may not include the target group and may suggest inappropriate changes to the product disadvantaging the manufacturer by 		<p>Candidates should make points which make a judgement or determine the value of something based on the role of concept screening, prototype production and first production run 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 award a maximum of 8 marks if candidates only refer to only 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
	<p>reducing the potential appeal of the product at the product testing stage and possibly affecting the product `s success (1 further mark for relevant developed point linked to the same area of product development)</p> <ul style="list-style-type: none"> • at the stage of first production run the food manufacturer produces the new product for the first time as a full production run in the factory. This is useful so the new product can be assessed for quality by the quality assurance team when produced within factory conditions (1 mark for relevant evaluative point linked to first production run). This allows the manufacturer to sort out potential production problems before large scale production which is beneficial to avoid downtime which could result in delayed production or loss of profit for the manufacturer. (1 further mark for relevant developed point linked to the same area of product development.) In addition, this stage allows the manufacturer to make changes to the product so that machinery can manufacture the product to a high standard ensuring consistency of quality when it is launched. (1 further mark for relevant developed point linked to the same area of product development) <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"> the Eatwell Guide suggests consumers should be including more fruit and vegetables in their diet. This is good as they contain fibre so give a feeling of fullness therefore reducing temptation to snack on fatty/sugary foods and help contribute to reducing obesity levels. (1 mark for relevant evaluative point linked to how current dietary advice can help reduce obesity levels). However, many low-income consumers cannot afford fruit and vegetables/may choose not to purchase them as they may be wasted so more likely to choose foods high in fat/sugar which could lead to weight gain if not very active. This excess energy will be stored as fat increasing risk of weight gain or obesity, therefore not reducing obesity levels (1 further mark for relevant developed evaluative point linked to same current dietary advice) current dietary advice suggests that consumers ‘total fat intake should be reduced to no more than 35% total food energy’ which is beneficial as it means consumers are taking in less high fat calories so less calories/energy to burn off reducing obesity levels. (1 mark for relevant evaluative point linked to how current dietary advice can help reduce obesity levels). This is important as carrying less body weight puts less strain on heart so helping reduce risk of coronary heart disease. (1 further mark for relevant developed evaluative point linked to same current dietary advice). However, low-income consumers may choose take-away/fast foods on a regular basis which tend to be popular/cheaper but are high in fat/sugar which increases their calorie intake. This can be detrimental to consumers health if the additional calories/excess calories are not burnt off this so can increase obesity levels. (1 further mark for relevant developed point linked to the same current dietary advice. <p>Or any other valid response.</p>	10	<p>Candidates should make points which make a judgement or determine ways in which current dietary guidance advice can help contribute to a reduction in obesity.</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 area of current dietary advice no marks will be awarded if the current dietary advice is inaccurate or not stated in its entirety <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"> • budget may influence consumer food choice as high-income consumers may be more likely to travel abroad and enjoy new foods so more likely to choose ethnic/foreign foods at home increasing their variety of food choice. (1 mark for accurate relevant point of discussion linked to how budget can influence food choice). However, if they do not like the ethnic/foreign food choice this could contribute to food waste (1 further mark for development of discussion point on budget) • lifestyle may influence consumer food choice as consumers who work long hours may have less time for food preparation and may choose cook-chill products which only require reheating to save time. (1 mark for accurate relevant point of discussion linked to how lifestyle can influence food choice). However, cook-chill products tend to use a lot of packaging which may not appeal to environmentally aware consumers (1 further mark for development of discussion point on lifestyle) • health may influence food choice as health aware consumers may be more likely to choose foods with clear traffic light labelling so they can select foods low in fat, sugar and salt. (1 mark for accurate relevant point of discussion linked to how health can influence food choice). This can be important for consumers with dietary conditions so can choose foods for example, low in saturated fat and salt to reduce risk of heart disease. (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 budget, lifestyle and health which may influence consumer choice of food.</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 • award a maximum of 8 marks if candidates only refer to one factor <p style="text-align: right;"><i>(up to a maximum of 10 marks)</i></p>

Question	Expected response	Max mark	Additional guidance
4.	<p>Possible responses could include:</p> <ul style="list-style-type: none"> • vitamin C is necessary for the formation of collagen, (the main protein of connective tissue) which binds body cells together. This is important for adults as it is essential for efficient healing of wounds/sores (1 mark for an explanation which makes clear the relationship between the function of Vitamin C and the role specifically related to adults). This speeds up healing and reduces risk of infection in wounds/sores, which is especially important if an adult has had invasive surgery so quickens up recovery process (1 further mark as response is a development of the same nutrient and further explains the function specifically related to adults) • folic acid is necessary to supplement iron to make red blood cells if iron is lacking in the diet. This is important as a deficiency in iron and folic acid could cause adults to become anaemic (1mark for an explanation which makes clear the relationship between the function of folic acid and the role specifically related to adults). This could result in symptoms including tiredness, lethargy, breathlessness which could hinder their daily activities/affect performance at work/sport. (1 further mark as response is a development of the same nutrient and further explains the function specifically related to adults) <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 vitamins in the diet of adults.</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 vitamin. <p style="text-align: right;"><i>(up to a maximum of 10 marks)</i></p>

Question	Expected response	Max mark	Additional guidance
5.	<p>Possible responses could include:</p> <ul style="list-style-type: none"> • a marketing technique a food manufacturer may use when marketing a food product for children is for them to pay for a product to be placed somewhere specific in a store to make their food product more visible to children e.g., placing product at children’s eye line or at the end of an aisle. <i>(An accurate marketing technique linked to food manufacturers and children supported by a relevant fact)</i> Similarly food manufacturers may use promotional deals (e.g., 3 for 2) to encourage parents to buy their products for children. <i>(A further fact which agrees with the initial fact)</i> This is beneficial for the manufacturer as it increases the likelihood of their product being bought, which increases their sales. <i>(An impact on the food manufacturer)</i> 1 mark for relevant point of analysis, which shows a valid marketing technique with accurate facts linked to children and the potential impact on the food manufacturer • another marketing technique a food manufacturer will use is bright and colourful packaging for products aimed at children, this is because children are drawn to things that look fun and exciting, so the bright colours in the packaging will attract the children and then they will pester parents to buy the product for them. <i>(An accurate marketing technique linked to food manufacturers and children supported by a relevant fact)</i> However, to make the bright and colourful packaging the manufacturer many need to use plastic which may not appeal to the environmentally friendly parent <i>(A further fact which disagrees with the initial fact)</i>, although this is cheap it can have a negative effect on the environment, therefore this may impact sales for the food manufacturer. <i>(An impact on the food manufacturer)</i> So ultimately the manufacturer may be contributing to global warming. (Development of analysis point) 	10	<p>Candidates must demonstrate the ability to identify, describe and explain the techniques used by a food manufacturer when marketing food products for children and the relationship between this.</p> <ul style="list-style-type: none"> • award 1 mark for each accurate, relevant point of analysis which is made up of: <ul style="list-style-type: none"> – an accurate marketing technique linked to food manufacturers and children supported by a relevant fact – a further fact which agrees or disagrees with the initial fact – an impact on the food manufacturer • award 1 further mark for any accurate, relevant development of that point • award a maximum of 9 marks if candidates only refer to one marketing technique. <p style="text-align: right;"><i>(up to a maximum of 10 marks)</i></p>

Question			Expected response	Max mark	Additional guidance
			<p>2 marks for relevant point of analysis, which shows a valid marketing technique with accurate facts linked to children and the potential impact on the food manufacturer and a development of that point.</p> <p>Or any other valid response</p>		

[END OF MARKING INSTRUCTIONS]