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Qualifications
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Health and Food Technology

Advanced Higher

Finalised Marking Instructions

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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) If a specific 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.
- (d) 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, candidate's 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
 - (iii) For each candidate response, the following provides an overview of the marking principles. Refer to the specific Marking Instructions for further guidance on how these principles should be applied.
 - A. Questions that ask candidates to Explain . . .**

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.

Candidates may provide a number of straightforward explanations, 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 judgement 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 this 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 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 Marks	Additional guidance
1.	<p>Candidates may be awarded marks for responses that, for the identified issue, make appropriate references to:</p> <ul style="list-style-type: none"> • matters addressed by the organic food products • use of chemicals in production/animal welfare • range/availability of organic products • cost • labelling/certification of food products • aesthetic/nutritional implications • health implications • any other relevant issue 	10	<p>Candidates should identify relevant points of information about possible consequences/implications for the consumer of their choice of organic food/availability of organic food, and 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> <p>Organic produce avoids the use of artificial chemicals and uses approved fertilisers only to produce crops and livestock without damage to the environment. Therefore the environmentally friendly consumer may be more inclined to buy these types of food products. (1 mark for link between organic food and the way it might impact on consumer choice.) However the residue from chemical sprays/pesticides from a neighbouring non-organic farm may still contaminate food products so the consumer may not feel it worthwhile to support organic foods. (1 mark for significance when taken together and the way this might impact on consumer choice).</p> <p>Consumers may consider organic food produce to taste better therefore this might encourage them to purchase it rather than non-organic produce. (1 mark for link between organic food and its impact on the consumer choice). However, many consumers believe that organic produce does not taste any better than non-organic produce so are less likely to purchase it. (1 mark for significance when taken together and the way this might impact on consumer choice).</p>

Question			Expected Response	Max Marks	Additional guidance
					<p>Organic foods are often more expensive to produce and are therefore more costly to buy than their non-organic counterparts. Consumers who support this ethos, may be prepared to pay the premium and seek out organically produced foods. (1 mark for link between organic food and the way it might impact on consumer choice.) Evidence shows that the extra cost may discourage consumers, who might otherwise wish to buy organic food products, from purchasing them. (1 mark for significance when taken together and the way this might impact on consumer choice).</p>

Question	Expected Response	Max Marks	Additional guidance
2.	<p>Vitamins could include:</p> <ul style="list-style-type: none"> • vitamin A, vitamin B complex, vitamin C, vitamin D, vitamin E, vitamin K • or any other vitamin relevant to an identified stage of life <p>Stages of life could include:</p> <ul style="list-style-type: none"> • infants, young children, adolescents, adults, elderly or any other correctly identified age span. <p>The explanation should include each of the following:</p> <ul style="list-style-type: none"> • a function of an identified vitamin relevant to an identified life stage • the specific importance of the vitamin 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 vitamin 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 vitamin or to a different life stage.</p> <p>For full marks, the candidate response must include at least two vitamins and one or more life stage.</p> <p>A maximum of 6 marks for 1 vitamin linked to any number of life stages.</p> <p>There is no maximum number of vitamins/stages of life to which the candidate could refer.</p> <p>Sample answers could include:</p> <p>As childhood is a period of rapid growth, an adequate intake of Vitamin A is required by young children to support general development. (1 mark for explanation of function linked to a specified life stage)</p> <p>Vitamin A is also required to keep the mucous membranes on the throat, bronchial and excretory systems moist and free from infection. As young children are frequently exposed to infection from others at school or nursery, and adequate intake of Vitamin A is required to prevent the skin and mucous membranes becoming dry and infected, and so reducing the risk of acquiring infections. (1 mark for development of explanation of a different function of the same vitamin, linked to the same specified life stage).</p>

Question	Expected Response	Max Marks	Additional guidance
			<p>Vitamin B2/riboflavin is required by the body to assist in the metabolism of proteins, fats and carbohydrates which is necessary for releasing energy from food. This is essential in a teenager's diet as this is when they are subject to periods of extremely rapid growth. Inadequate supplies of energy during this time would make them lethargic and less likely to be active. (1 mark for explanation of function of vitamin linked to a specified life stage.)</p> <p>Vitamin D is required to promote the absorption of calcium and phosphorus in order for bones to form properly so is important for the elderly when bone density is reduced. (1 mark for explanation of function linked to specified life stage) Vitamin D intake is important to prevent osteomalacia, an adult form of rickets. (1 mark for development of explanation linked to the specified life stage) Beyond the age of 70, the risk of fractures is increased significantly, so sufficient Vitamin D is required to aid healing when they occur. (1 mark for further development of function linked to the same life stage)</p> <p>As loss of memory, confusion and dementia are conditions that are common in old age, an adequate intake of Niacin is essential to help prevent or slow down the development of these. (1 mark for explanation of the function of a different vitamin linked to the same life stage)</p>

Question	Expected Response	Max Marks	Additional guidance
3.	<p>Evaluative points should make a judgement on how: An identified technological development can influence the food manufacturing process.</p> <p>Appropriate technological developments could include:</p> <ul style="list-style-type: none"> • Food additives • Functional foods • Cook chill products • Modified atmosphere packed products • Alternative proteins • Or any other valid technological development linked to a potential influence on food manufacturing. <p>For full marks, candidates must refer to two technological developments in their response.</p>	10	<p>Candidates should make evaluative points related to the impact of technological developments on 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 identified technological development.</p> <p>Marks can be awarded for each point or development of a point of evaluation relating to the identified technological development, wherever they appear in the candidate response.</p> <p>A food manufacturer may use an emulsifier eg lecithin to combine two ingredients that do not usually mix to form a stable emulsion. This allows food products such as mayonnaise to maintain its pleasing appearance for the consumer when displayed on supermarket shelves. (1mark for point of evaluation linking the function of an emulsifier to the influence on the food manufacturing process.) However some emulsifying ingredients are costly for the manufacturer and this may increase the final price of a food product so discouraging consumers from purchasing the product. (1 mark for developed point of evaluation linked to the same technological development: emulsifiers)</p> <p>Modified atmosphere packaging involves most of the oxygen in pre-packed food products being replaced with a mixture of carbon dioxide and nitrogen. This process slows down the growth of bacteria and micro-organisms so shelf life of products is extended. The manufacturer may choose to use this type of packaging as it is likely to reduce costs as waste is reduced. (1 mark for point of evaluation linking the function of MAP to the influence on the food manufacturing process) As modified atmosphere products will have a longer shelf life, consumers may choose these as the product can be stored at home for longer so allowing them to shop less frequently. This may increase sales for the manufacturer. (1 mark for developed point of evaluation linked to the same technological development:</p>

Question			Expected Response	Max Marks	Additional guidance
					<p>MAP) However, if the manufacturer supplies a local retailer or a retailer with a high turnover the extra cost involved may not be offset by the amount saved in waste. The manufacturer might therefore not deem the cost to be worthwhile. (1 mark for developed point of evaluation linked to the same technological development: MAP)</p>

Question	Expected Response	Max Marks	Additional guidance
4.	<p>Evaluative points should make a judgement on the impact manufacturers may have on childhood obesity.</p> <p>Ways a manufacturer might impact on childhood obesity could include:</p> <ul style="list-style-type: none"> • Packaging • Labelling • Portion/pack size • Price • Product placement • Celebrity endorsement • Advertising • Sponsorship • Ingredient selection • Or any other correctly identified influence/impact linked to the manufacturer. 	10	<p>Candidates should make evaluative points related to the influence of the food manufacturer on childhood obesity.</p> <p>1 mark will be awarded for a point of evaluation or a development of a point of evaluation.</p> <p>Marks can be awarded for each point or development of a point of evaluation relating to the influence the manufacturer has on childhood obesity, 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 identified way the manufacturer may impact on childhood obesity. • marks may be awarded for accurate evaluative comments relating to more than one way a manufacturer might impact on childhood obesity when taken together. <p>Manufacturers may state on the label that a food product that specifically targets children contains no added sugars. The product may appeal to parents and make them more likely to buy. The product however, may contain ingredients which are naturally high in sugar and so will contribute to childhood obesity (1 mark for point of evaluation linked to the way a manufacturer may influence childhood obesity)</p> <p>Some parents may actively look for nutritional information on packaging and may choose whether or not to buy the product based on this information. Manufacturers who provide this information would help parents make informed choices and may contribute to reducing the risk of childhood obesity. (1 mark for point of evaluation linked to the same way a manufacturer may influence childhood obesity)</p>

Question	Expected Response	Max Marks	Additional guidance
			<p>Manufacturers may put cartoon images on the packaging of food products These are likely to attract children, and are often placed on shelves at child height so that they are within the reach of children who may pick them up. Once a child has picked up a product, the parent may be more inclined to buy it. The product may be high in fat or sugar, and this purchase may contribute to childhood obesity. (1 mark for point of evaluation of the way a manufacturer may influence childhood <i>obesity</i>) However, manufacturers often package ready prepared fruit in child-sized bags. These may appeal to parents as an alternative to high fat/high sugar products for their children, so may contribute to a reduction in childhood obesity. (1 mark for point of evaluation linked to the same way a manufacturer may influence childhood obesity)</p>

[END OF MARKING INSTRUCTIONS]