

2018 Health and Food Technology Higher

Finalised Marking Instructions

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General marking principles for 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, ie marks should be awarded for what is correct and not deducted for 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) (i) For marks to be awarded, responses must relate to the question asked. Where candidates give points of knowledge without specifying the context, these should be awarded marks unless it is clear that they do not relate to the context of the question.
 - (ii) In this question paper, the following command words are used:
 - A: Describe
 - B: Explain
 - C: Evaluate
 - D: 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 Describe . . .

Candidates should provide a statement of characteristics or features related to the question. It is more than an outline or a list. They need not be in any particular order. Candidates 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:

- 1 mark should be awarded for each accurate relevant point of knowledge linked to the context of the question
- **a further mark** should be awarded for any accurate relevant point that is developed from the same point of knowledge.

B. 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 or a smaller number of developed explanations, or a combination of these.

Up to the total mark allocation for this question:

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

C. Questions that ask the candidate to Evaluate . . .

Candidates should make a number of comments which make a judgement and determine the value of something based on the criteria provided in the question. Candidates may provide a number of straightforward comments or a smaller number of developed comments, or a combination of these.

Up to the mark allocation for this question:

- 1 mark should be awarded for each accurate relevant evaluative comment linked to the context of the question
- a further mark should be awarded for any accurate relevant evaluative comment that is developed from the same point of information.

D. Questions that ask the candidate to Analyse . . .

Candidates should make a number of comments related to the context of the question. Candidates should identify appropriate information from the given sources, the relationship between the identified information, and their significance when taken together.

Up to the mark allocation for this question:

- 1 mark should be awarded for each explanation of the impact of one piece of information linked to the context of the question
- 1 further mark should be awarded for an explanation that is developed, to include the impact of a piece of information from a second source linked to the same identified piece of information. (2 marks)

OR

• 2 further marks should be awarded for an explanation that is developed to include the impact of further information from two further sources linked to the same identified piece of information. (3 marks)

Marking instructions for each question

Q	uestion	Expected answer(s)	Max mark	Additional guidance	
1.	(a)	 Possible candidate responses could include: money available will influence consumer choice as if it is limited they will be more likely to take advantage of special offers adverts for food on social media/TV may encourage consumers to try food products they have not tried before therefore may increase their food choice more people travel abroad and want to eat similar foods at home which will influence people to buy different ingredients/food products when at home television cooking shows influence consumers to bake/cook what is on the show and as a result buy different ingredients discount supermarkets can influence consumers to think more carefully about the cost of food and be less loyal to brand names. Accept any other valid response.	3	Candidates should make a number of points that make the issue plain or clear for example by showing connections between the reasons given and the influence on food choice. Up to the mark allocation for this question: • award 1 mark for each accurate relevant explanation. (up to a maximum of 3 marks)	

Quest	ion	Expected answer(s)	Max mark	Additional guidance
(b)		 calcium is necessary for the formation/maintenance/development of bones which helps to reduce the risk of osteoporosis vitamin D will help the absorption of calcium, which is essential for bone formation reducing the risk of osteoporosis phosphorous combines with calcium to produce calcium phosphate which is necessary for bone hardness/strength preventing osteoporosis a low sodium intake will slow down the loss of calcium from the bones and help to prevent osteoporosis a diet high in fibre will hinder calcium absorption leading to osteoporosis a diet high in phytic acid will hinder calcium absorption leading to osteoporosis protein/potassium/magnesium in the diet could assist absorption of calcium and so prevent osteoporosis. Accept any other valid response. 	3	Candidates should make a number of points that make the issue plain or clear for example by showing connections between the dietary factor and prevention of osteoporosis. Up to the mark allocation for this question: • award 1 mark for each accurate relevant explanation. (up to a maximum of 3 marks)

Question	Expected answer(s)	Max mark	Additional guidance
(c)	Aspect of the diet: energy intake. The energy intake is high for the pregnant woman. This could cause her excessive weight gain. (Explanation of the impact of the energy intake linked to the Dietary Reference Valve (DRVs) - 1 mark) This could cause difficulty after the birth to regain pre pregnancy weight/difficulties during labour/increases risk of haemorrhoids/high blood pressure/could lead to obesity, as she may not be active during her pregnancy. (Possible consequence of the nutrient intake on health - 1 mark) The wholemeal toast contains carbohydrates, which will provide energy contributing to her energy intake. (Conclusion about the contribution made by the lunch - 1 mark) Aspect of the diet: protein intake. The protein intake is high for the pregnant woman, and as she may not be physically active, it will be stored as fat/she will gain weight. (Explanation of the impact of the nutrient intake linked to the DRVs - 1 mark)	9	Candidates should make a number of comments related to the pregnant women. Candidates should identify appropriate information from table 1, table 2 and the lunch, the relationship between this information and their significance when taken together. For each of three identified aspects of the woman's diet in relation to the DRVs: 1 mark is available for explaining the impact of different aspects of the pregnant women's diet in relation to the DRVs 1 mark is available for explaining the possible consequences for the pregnant woman's health 1 mark is available for reaching a conclusion about the contribution made by the lunch to the pregnant woman's diet. (up to a maximum of 9 marks)

Question	Expected answer(s)	Max mark	Additional guidance
	Any additional protein could be stored as fat, causing the pregnant woman to gain weight, this could result in her suffering from obesity/coronary heart disease. (Possible consequence of the nutrient intake on health - 1 mark)		
	Eggs are contributing to her high protein intake. (Conclusion about the contribution made by the lunch - 1 mark)		
	Aspect of the diet: vitamin C intake.		
	The vitamin C intake is high for the pregnant women, which will ensure that her iron is absorbed. (Explanation of the impact of the nutrient intake linked to the DRVs - 1 mark)		
	This will reduce the risk of anaemia, which is common in pregnancy. (Possible consequence of the nutrient intake on health - 1 mark)		
	The spinach/strawberries are contributing to her vitamin C intake. (Conclusion about the contribution made by the lunch - 1 mark)		
	Aspect of the diet: iron intake.		
	The iron intake is low for the pregnant women, which means she will have a lack of red blood cells/feel tired. (Explanation of the impact of the nutrient intake linked to the DRVs - 1 mark)		
	This may contribute to anaemia, which is common in pregnancy. (Possible consequence of the nutrient intake on health - 1 mark)		

Question	Expected answer(s)	Max mark	Additional guidance
	The spinach/egg/wholemeal bread is contributing to her iron intake. (Conclusion about the contribution made by the lunch - 1 mark) Aspect of the diet: folate intake.		
	The folate intake is low for the pregnant woman, which will affect cell formation in the foetus. (Explanation of the impact of the nutrient intake linked to the DRVs - 1 mark)		
	This may contribute to the baby being born with a neural tube defect. (Possible consequence of the nutrient intake on health - 1 mark)		
	The spinach/egg/wholemeal bread will contain folate, which will contribute to her folate intake. (Conclusion about the contribution made by the lunch - 1 mark)		
	Accept any other valid response.		

Question	Expected answer(s)	Max mark	Additional guidance
(d)	 Aeration Aeration occurs when eggs are whisked/beaten, trapping air in baked products giving a light/fluffy texture. (developed answer) Aeration occurs when egg whites are whisked, creating a foam in a baked product. Coagulation Egg when heated coagulates, which helps set/form the structure of baked products. Glazing Eggs can be used to glaze foods and produce a golden brown result in baked products. Binding Binding occurs when eggs are used to bring ingredients together before baking. Accept any other valid response. 	3	Candidates should make a number of points that make the issue plain or clear, for example by showing connections between the function of eggs and baked products. Up to the mark allocation for this question: • award 1 mark for each accurate relevant explanation • award a further mark for any explanation that is developed. (up to a maximum of 3 marks)

Question	Expected answer(s)	Max mark	Additional guidance		
(e)	Possible candidate responses could include: • +ve alternative proteins/TVP/Quorn/tofu/ beans are a source of protein, this is good as it will aid growth, repair and maintenance of body cells • +ve beans/cereals are high in dietary fibre, so are suitable as they will reduce constipation/bowel disorders • -ve Quorn/TVP lack flavour, this may not be	2		A clear understanding of the use of alternative proteins. A judgement of suitability. The impact in the diet/on health.	
	 -ve Quorn/TVP lack flavour, this may not be suitable as the consumer may need to add salt, which can contribute to high blood pressure +ve alternative proteins/TVP/Quorn/tofu/ beans are low in fat, this is suitable as it will help meet current dietary advice, therefore reducing the risk of CHD/obesity (developed response). Accept any other valid response. 	a smaller number these. Up to the mark and 1 main	provide a number of straightforward evaluations or er of developed evaluations, or a combination of allocation for this question: rk for each relevant evaluation ther mark for any evaluation that is developed. (up to a maximum of 2 marks)		

Q	Question		Expected answer(s)	Max mark		Additional guidance
2.	(a)		Possible candidate responses could include: salty 1 (very low) +ve: the rice salad has been rated very low for salty, indicating that very little/no salt has been added. This could be good for teenagers, as it will help prevent high blood pressure colour 5 (very high) +ve: the rice salad has been rated very high for colour, indicating a variety of vegetables may have been added/suggesting it is bright and colourful. This may make it suitable for teenagers, as they will be attracted to the colours in the rice pot flavour 2 (low) -ve: the rice salad has a low score for flavour, which may indicate no herbs/spices have been used/tastes bland. This is bad as teenagers may not like the bland flavour aroma 2 (low) +ve: the rice salad has a low score for aroma, which may suggest it lacks smell. This may be good for teenagers, as they won't be put off by the smell of the rice salad and be encouraged to try it	4	Fact Opinion Consequence Candidates may a smaller number these. • Award 1 mar • Award a furt • A maximum	A clear understanding of the rating related to the rice salad. A judgement of suitability. The impact on the needs of teenagers. provide a number of straightforward evaluations or er of developed evaluations, or a combination of the mark for any evaluation that is developed. of 2 marks may be awarded for developed linked to the same attribute. (up to a maximum of 4 marks)

Question	Expected answer(s)	Max mark	Additional guidance
	crunchiness 4 (high) +ve: the crunchiness has been rated high. This may indicate that raw vegetables have been used in the rice salad. This is good for teenagers, as it will help them to meet the dietary goal to increase consumption of vegetables. This could prevent coronary heart disease in later life, as vegetables are low in fat. (developed answer) Accept any other valid response.		

Question	Expected answer(s)	Max mark	Additional guidance
(b) (i)	Possible candidate responses could include: Concept Generation During concept generation, the food manufacturer could research the market more thoroughly to ensure they had found a gap in the	1	Candidates should make a number of points that make the issue plain or clear, for example by showing connections between the product development stage and the way it can be improved by the manufacturer.
	market.		Award 1 mark for a correct explanation related to each stage.
(ii)	Prototype Production During prototype production, the food manufacturer could have considered more possible amendments that could have been made, and make more modifications to the recipe.	1	(up to a maximum of 3 marks)
(iii)	Marketing plan During marketing plan, the food manufacturer could have considered more ways to promote the product to attract more consumers. Accept any other valid response.	1	

Question	Expected answer(s)	Max mark		Additional guidance
(c)	 Possible candidate responses could include: -ve Food Standards Scotland produce leaflets about healthy eating. This may not help consumers improve their health, as they may not read the information +ve Food Standards Scotland provide a food hygiene information service. This would allow consumers to check the rating of a restaurant, which may be useful as they could avoid restaurants that have a poor hygiene rating +ve environmental health departments will provide advice for consumers, which is good as it will help them make informed choices when purchasing food +ve Which? produce a monthly magazine which regularly has articles related to food eg food labelling, this is good as consumers will be able to become better informed consumers +ve Food Standards Scotland produce television adverts about healthy eating. This is good as consumers will get practical tips on how to make healthier food choices, for example changing snacks, this could help reduce their calorie intake and prevent obesity. (developed answer) 	3	the information food. Fact Opinion Consequence Candidates may smaller number of Award 1 mar	A clear understanding of the information provided by the consumer organisation. A judgment of suitability. The impact on consumer food choice. provide a number of straightforward evaluations or a of developed evaluations, or a combination of these. k for each relevant evaluation. her mark for any evaluation that is developed. (up to a maximum of 3 marks)
	Accept any other valid response.			

Q	uestion	Expected answer(s)	Max mark	Additional guidance		
3.	(a)	Possible candidate responses could include: • +ve functional foods have the potential to improve health, this is good to consumers as it may reduce the risks of diet related diseases • +ve many of the probiotic drinks help to fight a wide range of food poisoning bacteria, this is good as regular consumption by consumers may reduce the risk of food poisoning • +ve functional foods can be used to provide a specific nutrient in a product that would not normally be found in the food product. This is good for consumers as it would allow them to make improvements to health quicker • -ve functional foods need to be eaten in a fairly large quantity/on a long-term basis to effect any improvement on health, this is bad for consumers because no immediate health improvements may occur • -ve need to purchase the functional foods daily for any long lasting health benefits, this is bad as it may be an expensive outlay for the consumer • -ve some functional foods are more expensive than the regular foods, this is bad because		Fact Opinion Consequence • Award 1 mai	ıld make a number of evaluative comments related to	
		consumers on a restricted budget may not be able to afford them/may buy a different product. Accept any other valid response.				

Question	Expected answer(s)	Max mark	Additional guidance
(b)	 if someone is obese their body will be heavier than it should be, which puts an additional strain on the heart, causing chest pain and increasing the risk of coronary heart disease (developed answer) if someone is obese then their body fat will be much higher, and therefore could increase their risk of heart disease/high blood pressure there is an increased risk of high blood pressure if someone is obese, therefore they are more likely to suffer from a stroke suffering from obesity increases the risk of type 2 diabetes, as not enough insulin is produced for the body mass suffering from obesity means their body is carrying additional weight, which can lead to joint pain/arthritis/lower back pain someone suffering from obesity may be unhappy with their body size, and as a result suffer from low self-esteem. Accept any other valid response.	3	Candidates should make a number of points that make the issue plain or clear for example by showing connections between obesity and effect on health. Up to the mark allocation for this question: • award 1 mark for each accurate relevant explanation • award a further mark for any explanation that is developed. (up to a maximum of 3 marks)

Question	Expected answer(s)	Max mark	Additional guidance	
(c)	(c) Possible candidate responses could include: the environment +ve food can be packaged in compostable materials-netting/cardboard, this is better for the environment as they will not cause pollution +ve UHT/canned foods packing preserves foods without the need for refrigeration, this is good for the environment as will reduce energy required to store food, producing less CO2 -ve food residue from food packaging may not be cleaned off meaning it cannot be recycled, this is not good for the environment as it will	Fact Opinion Consequence Candidates may	A clear understanding of food packaging. A judgement of suitability The impact on the environment/consumer. provide a number of straightforward evaluations or er of developed evaluations, or a combination of	
		 Award 1 ma Award a furt Award a max to the same Award a max 	rk for each relevant evaluation. ther mark for any evaluation that is developed. ximum of 2 marks for developed evaluations linked. impact of food packaging on the environment. ximum of 3 marks for evaluations linked to either ment or the consumer. (up to a maximum of 4 marks)	

Question	Expected answer(s)	Max mark	Additional guidance
	 +ve food packaging often has a recycling symbol/logo, this is good as consumers will easily see how the packaging can be recycled +ve food packaging on perishable foods will have a use by date, this is good for consumers as they can ensure they eat food that is safe and won't give them food poisoning -ve food packaging often has too much information, this is not good for consumers as it may be difficult to decide if the food is suitable for the environment. +ve food packaging can be bright/colourful/tasteful which is good, as it may encourage consumers to purchase the product resulting in increased variety in their diet (developed answer) +ve food packaging is good for the consumer, as modified atmosphere packaging can be used which protects the food from being damaged and MAP prolongs the shelf life of food. (developed answer) 		
	Accept any other valid response.		

Question		Expected answer(s)	Max mark	Additional guidance	
4.	(a)	 +ve locally produced foods have not travelled as far, so are fresher, which is good for the restaurant as the food will look better, therefore encouraging consumers to purchase them +ve: locally produced food may contain more nutrients, as there is less time between harvest and table, therefore this may increase the number of health conscious customers eating in the restaurant, therefore increasing sales and these consumers may recommend to others (developed answer) +ve: locally produced foods support local economies, which is good as the restaurant can build relationships with other local businesses +ve: restaurants can promote locally produced foods on their menu, which is good as it may encourage consumers who want to eat fresh/low food mile foods to purchase them, increasing profits for the restaurant -ve: locally produced foods may be very seasonal, which may be bad as the restaurant may need to change their menu more often -ve: locally produced foods may have restricted availability, which may be bad as the restaurant may not be able to purchase the quantity needed for their restaurant numbers/covers. Accept any other valid response. 	3	Fact Opinion Consequence Candidates may a smaller number these. • Award 1 ma	A clear understanding of the use of locally produced foods. A judgment of suitability. The impact on the needs of restaurant. Provide a number of straightforward evaluations or er of developed evaluations, or a combination of the mark for any evaluation that is developed. (up to a maximum of 3 marks)

Quest	ion	Expected answer(s)	Max mark	Additional guidance
(b)		 the burger restaurant should purchase foods from a reputable supplier, ensuring food safety systems are in place to prevent contamination the burger restaurant should ensure records are kept of the temperature of their fridges, to ensure meat/high risk foods are stored between 1°C-4°C the burger restaurant should keep food out of the danger zone, to reduce bacterial multiplication to ensure the food is safe the burger restaurant should ensure all staff who are handling food are kept up to date with best practice in safe food preparation, so reducing the risk of food poisoning the burger restaurant should ensure that all raw meat used in the burgers is stored in a separate fridge, to ensure that cross contamination does not occur. Accept any other valid response.	3	Candidates should make a number of points that make the issue plain or clear, for example by showing connections between the control measures and food safety. Up to the mark allocation for this question: • award 1 mark for each accurate relevant explanation • award a further mark for any explanation that is developed. (up to a maximum of 3 marks)

(c) Possible candidate responses could include: 4 Candidates should make a number of evaluative the contribution of red meat in the diet. • +ve: red meat contains protein. This is good	
because protein in the diet is used for growth/repair/maintenance of body cells and tissues • -ve: red meat is high in saturated fat. This can be bad in the diet as it will contribute to coronary heart disease • +ve: red meat contains vitamin B12. This is good because it helps maintain health nerve cells • -ve: red meat is high in fat. This can be bad in the diet as if eaten to excess can contribute to obesity • +ve: red meat contains zinc. This is good Fact A clear understanding of the comeat in the diet. Opinion A judgement of suitability. Consequence The impact of the contribution • Award 1 mark for each relevant evaluation. • Award a maximum of 2 marks for developed to the same identified aspect of the contribute the diet.	ontribution of red in the diet. at is developed. d evaluations linked

[END OF MARKING INSTRUCTIONS]