
GCSE

Food Preparation and Nutrition

8585/W-Paper 1 Food Preparation and Nutrition
Mark scheme

June 2018

Version/Stage: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Section A			
Question	Answer Key	Assessment Objective	Total marks
1.01	D – Vitamin is the only micronutrient	AO1	1
1.02	D – Coeliac disease is an intolerance to wheat	AO1	1
1.03	C – Anaemia is linked to iron deficiency	AO1	1
1.04	C – The % of energy recommended from carbohydrate is: 50%.	AO1	1
1.05	D – 5°C to 63°C is the danger zone	AO1	1
1.06	A – Room temperature is correct storage condition	AO1	1
1.07	D – simmering, boiling, poaching are all water based methods	AO1	1
1.08	A – Sneezing into food is bacterial contamination	AO1	1
1.09	B – Convection is when heat is transferred through liquids	AO1	1
1.10	B – Vitamins B and C are water soluble vitamins	AO1	1
1.11	A – Brown surface is caused by caramelisation	AO1	1
1.12	D – Vitamin D helps the body to absorb Calcium	AO1	1
1.13	C – Flour is the only primary processed food	AO1	1
1.14	B – Eggs are the only free range food	AO1	1
1.15	C – Flour has an extraction rate	AO1	1

1.16	A – Apples are affected by enzymic browning	AO1	1
1.17	D – Food miles is the correct term	AO1	1
1.18	A – Vitamin A is an antioxidant	AO1	1
1.19	C – Serving suggestions	AO1	1
1.20	C – Nutrients are added in fortification	AO1	1

Section B			
Qu	Part	Marking guidance	Total marks
02	1	Give four personal hygiene rules that must be followed by people serving food. Marking guidance The question is assessed against AO1 Students will recall knowledge and understanding of personal hygiene when serving food. Do not give credit for food safety. 1 mark for each correct response given either from the list below or other relevant responses worthy of credit. Indicative content: • tie back hair • cover long hair/beards with hair nets • personal habits: Do not cough, spit, pick nose or sneeze over foods. Do not chew when serving food. • do not put fingers into food being served, use clean teaspoon each time tasting foods • do not double dip when tasting food is ready for serving • clothing: Wear protective clothing e.g. clean aprons • wear disposable gloves when handling food • wash hands before serving food • wash hands after e.g. using the toilet, on return from outside, after handling raw foods • keep fingernails short and clean • do not wear nail varnish or false nails • do not allow sweat to go onto food. • use tongs and other utensils not fingers. • do not lick fingers or cooking utensils. • use blue gloves when handling different types of food e.g. cooked and raw. • cover any cuts with a protective, blue/ bright coloured plaster • do not wear jewellery • do not serve food if suffering from illness, sickness, diarrhoea or fever. • other relevant responses	4

02	2	State two food safety rules that must be used for each of the following. Explain why each rule is needed. Marking guidance This question is assessed against AO2. Students will apply their knowledge and understanding of food safety to specified foods. In each section: <table><tr><td>Response identifies two correct safety rules and a valid explanation for each</td><td>4 marks</td></tr><tr><td>Response correctly identifies two safety rules but only one of these has a valid explanation</td><td>3 marks</td></tr><tr><td>Responses correctly identifies either two safety rules but with incorrect or no explanations or correctly identifies one safety rule which is linked to a valid explanation</td><td>2 marks</td></tr><tr><td>Response correctly identifies one food safety rule</td><td>1 mark</td></tr><tr><td>No answer worthy of credit</td><td>0 marks</td></tr></table> One mark for rule, one mark for the explanation Key terms such as high risk, bacteria multiply need qualification for award of credit at AO2 Indicative content for: Storage of fresh, cooked prawns: <table><tr><th>Food safety rule</th><th>Explanation</th></tr><tr><td> • Store as soon as possible • Cool before putting in fridge </td><td> • Slow down microbial growth/deterioration </td></tr><tr><td> • Do not leave in warm place e.g. room temp/danger zone </td><td> • Bacteria multiply more rapidly in warm temperatures • Bacteria multiply rapidly between 5 to 63°C. Bacteria multiply every 20 minutes </td></tr><tr><td> • Store at 0 to below 5°C • Store in refrigerator .Not on lower shelf. • Store in freezer -18C </td><td> • Bacteria multiply slowly in cold temperatures. Dormant in freezer. • They must be stored at below 5°C to prevent pathogenic bacteria multiplying • Prawns should not be stored in the danger zone of 5 to 63°C • To prevent food poisoning </td></tr><tr><td> • Cover • Store above raw foods </td><td> • Covering will prevent cross contamination </td></tr></table>	Response identifies two correct safety rules and a valid explanation for each	4 marks	Response correctly identifies two safety rules but only one of these has a valid explanation	3 marks	Responses correctly identifies either two safety rules but with incorrect or no explanations or correctly identifies one safety rule which is linked to a valid explanation	2 marks	Response correctly identifies one food safety rule	1 mark	No answer worthy of credit	0 marks	Food safety rule	Explanation	• Store as soon as possible • Cool before putting in fridge	• Slow down microbial growth/deterioration	• Do not leave in warm place e.g. room temp/danger zone	• Bacteria multiply more rapidly in warm temperatures • Bacteria multiply rapidly between 5 to 63°C. Bacteria multiply every 20 minutes	• Store at 0 to below 5°C • Store in refrigerator .Not on lower shelf. • Store in freezer -18C	• Bacteria multiply slowly in cold temperatures. Dormant in freezer. • They must be stored at below 5°C to prevent pathogenic bacteria multiplying • Prawns should not be stored in the danger zone of 5 to 63°C • To prevent food poisoning	• Cover • Store above raw foods	• Covering will prevent cross contamination	8
Response identifies two correct safety rules and a valid explanation for each	4 marks																						
Response correctly identifies two safety rules but only one of these has a valid explanation	3 marks																						
Responses correctly identifies either two safety rules but with incorrect or no explanations or correctly identifies one safety rule which is linked to a valid explanation	2 marks																						
Response correctly identifies one food safety rule	1 mark																						
No answer worthy of credit	0 marks																						
Food safety rule	Explanation																						
• Store as soon as possible • Cool before putting in fridge	• Slow down microbial growth/deterioration																						
• Do not leave in warm place e.g. room temp/danger zone	• Bacteria multiply more rapidly in warm temperatures • Bacteria multiply rapidly between 5 to 63°C. Bacteria multiply every 20 minutes																						
• Store at 0 to below 5°C • Store in refrigerator .Not on lower shelf. • Store in freezer -18C	• Bacteria multiply slowly in cold temperatures. Dormant in freezer. • They must be stored at below 5°C to prevent pathogenic bacteria multiplying • Prawns should not be stored in the danger zone of 5 to 63°C • To prevent food poisoning																						
• Cover • Store above raw foods	• Covering will prevent cross contamination																						

		<table><tr><td> • Cover in air tight container </td><td> • Prevents possible cross contamination </td></tr><tr><td> • Use by use by date </td><td> • Use by indicates when food is still safe to eat • Prawns are a perishable high risk food which are ready to eat and may cause food poisoning </td></tr><tr><td> • Use oldest foods first • Label prawns clearly with date </td><td> • Allows for stock rotation and the food with shorter use by date is used first </td></tr><tr><td> • Check internal temperatures of refrigerator </td><td> • Check that refrigerator is maintained at correct temperature </td></tr></table>	• Cover in air tight container	• Prevents possible cross contamination	• Use by use by date	• Use by indicates when food is still safe to eat • Prawns are a perishable high risk food which are ready to eat and may cause food poisoning	• Use oldest foods first • Label prawns clearly with date	• Allows for stock rotation and the food with shorter use by date is used first	• Check internal temperatures of refrigerator	• Check that refrigerator is maintained at correct temperature		
• Cover in air tight container	• Prevents possible cross contamination											
• Use by use by date	• Use by indicates when food is still safe to eat • Prawns are a perishable high risk food which are ready to eat and may cause food poisoning											
• Use oldest foods first • Label prawns clearly with date	• Allows for stock rotation and the food with shorter use by date is used first											
• Check internal temperatures of refrigerator	• Check that refrigerator is maintained at correct temperature											
	Indicative content for: Reheating of cooked chicken: <table><tr><th>Food safety rule</th><th>Explanation</th></tr><tr><td> • Use a sterilised food probe to check the core temperature </td><td> • Food probes are accurate and provide a digital reading </td></tr><tr><td> • Only reheat once </td><td> • Bacterial growth is more likely if food is reheated more than once </td></tr><tr><td> • Reheat core temperature to 75°C • Reheat until piping hot </td><td> • The core of the chicken should be 75°C. Food poisoning risk if pathogenic bacteria not destroyed. Bacteria will begin to be destroyed after 75°C </td></tr><tr><td> • Check date mark on cooked chicken </td><td> • Food after use by date is not safe to eat • High risk foods can be a food poisoning risk </td></tr></table>	Food safety rule	Explanation	• Use a sterilised food probe to check the core temperature	• Food probes are accurate and provide a digital reading	• Only reheat once	• Bacterial growth is more likely if food is reheated more than once	• Reheat core temperature to 75°C • Reheat until piping hot	• The core of the chicken should be 75°C. Food poisoning risk if pathogenic bacteria not destroyed. Bacteria will begin to be destroyed after 75°C	• Check date mark on cooked chicken	• Food after use by date is not safe to eat • High risk foods can be a food poisoning risk	
Food safety rule	Explanation											
• Use a sterilised food probe to check the core temperature	• Food probes are accurate and provide a digital reading											
• Only reheat once	• Bacterial growth is more likely if food is reheated more than once											
• Reheat core temperature to 75°C • Reheat until piping hot	• The core of the chicken should be 75°C. Food poisoning risk if pathogenic bacteria not destroyed. Bacteria will begin to be destroyed after 75°C											
• Check date mark on cooked chicken	• Food after use by date is not safe to eat • High risk foods can be a food poisoning risk											

03	1	Information about two meals is given below. You should use this information when answering the question that follows. With reference to the ingredients, nutrient content and reference intake for each of the dishes, assess the suitability of each meal for an elderly person. Evaluate which meal is the healthier choice. Include justified reasons in your answer. Marking guidance This question is assessed against AO4. Students will analyse the information given and evaluate each of the meals in relation to the health of an elderly person. <table><tr><td>Responses will include detailed factual explanations and qualified reasons which justify an appropriate meal choice and show thorough knowledge and understanding of the dietary needs of the elderly. There will be a good balance between analysis and evaluation.</td><td>9-12 marks</td></tr><tr><td> Analysis is excellent and comparison of the meals is thorough and makes reference to at least 5-6 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation makes sound judgements and accurate conclusions are drawn which highlight elements required for a healthy diet for an elderly person and include 5-6 relevant justified reasons which are linked to analysis/findings. </td><td></td></tr><tr><td> Responses will include some factual explanations linked to the dietary needs of the elderly and will include qualified reasons which justify an appropriate meal choice and show knowledge and understanding of the dietary needs. Response may be stronger in either analysis or evaluation Analysis is good and comparison of the meals makes reference to 3-4 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation draws some conclusions which highlight points required for a healthy diet, some for an elderly person and includes 3-4 relevant justified reasons which are linked to analysis/findings. </td><td>5-8 marks</td></tr><tr><td>Responses will include limited factual explanations linked to the dietary needs of the elderly and will</td><td>1-4 marks</td></tr></table>	Responses will include detailed factual explanations and qualified reasons which justify an appropriate meal choice and show thorough knowledge and understanding of the dietary needs of the elderly. There will be a good balance between analysis and evaluation.	9-12 marks	Analysis is excellent and comparison of the meals is thorough and makes reference to at least 5-6 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation makes sound judgements and accurate conclusions are drawn which highlight elements required for a healthy diet for an elderly person and include 5-6 relevant justified reasons which are linked to analysis/findings.		Responses will include some factual explanations linked to the dietary needs of the elderly and will include qualified reasons which justify an appropriate meal choice and show knowledge and understanding of the dietary needs. Response may be stronger in either analysis or evaluation Analysis is good and comparison of the meals makes reference to 3-4 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation draws some conclusions which highlight points required for a healthy diet, some for an elderly person and includes 3-4 relevant justified reasons which are linked to analysis/findings.	5-8 marks	Responses will include limited factual explanations linked to the dietary needs of the elderly and will	1-4 marks	12
Responses will include detailed factual explanations and qualified reasons which justify an appropriate meal choice and show thorough knowledge and understanding of the dietary needs of the elderly. There will be a good balance between analysis and evaluation.	9-12 marks										
Analysis is excellent and comparison of the meals is thorough and makes reference to at least 5-6 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation makes sound judgements and accurate conclusions are drawn which highlight elements required for a healthy diet for an elderly person and include 5-6 relevant justified reasons which are linked to analysis/findings.											
Responses will include some factual explanations linked to the dietary needs of the elderly and will include qualified reasons which justify an appropriate meal choice and show knowledge and understanding of the dietary needs. Response may be stronger in either analysis or evaluation Analysis is good and comparison of the meals makes reference to 3-4 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation draws some conclusions which highlight points required for a healthy diet, some for an elderly person and includes 3-4 relevant justified reasons which are linked to analysis/findings.	5-8 marks										
Responses will include limited factual explanations linked to the dietary needs of the elderly and will	1-4 marks										

		include reasons to justify a meal choice that shows basic knowledge and understanding of the dietary needs. There may be an imbalance between analysis and evaluation where one aspect may be omitted or stronger. Analysis is limited and comparison of the meals makes reference to 1-2 separate points relating to the ingredients, nutrient content and/or reference intake referred to in the indicative content. Evaluation draws basic conclusions with limited reference to the requirements of a healthy diet for an elderly person and includes 1-2 reasons linked to their analysis of the data provided.	
		Nothing worthy of credit	0 marks
		Indicative content Responses are unlikely to give detailed data below; this is given for guidance only. Analysis Energy: Both the fish pie meal and the meat pie meal are within the expected RI for a main meal in a day with a third of the energy requirements. The meat pie is higher with 33% and if the elderly person is sedentary this would be more of a concern than 20% for the fish pie meal. Calories will come mainly from carbohydrates (potatoes – the main ingredient) in the fish pie meeting the % energy requirements. Calories will come from other ingredients e.g. cheese/fat. Protein: 31g in fish pie giving 68% of daily needs compared to 26g and 58% of daily needs in meat pie. Over half of daily needs provided by both pies. Carbohydrates: fish pie has 48g 21% RI which is slightly less than the meat pie but the meat pie is better in terms of sugar content at 4.1g 5% compared to 11g and 13% RI in the fish pie. Fats: meat pie at 39g 56%RI has considerably more than the fish pie with only 11g 16% RI, meat pie high in saturated fats giving 110% RI more than the daily needs in only one meal. Compared to only 4g 20%RI in the fish pie. This is due to the fat used in the pastry and in roasting the potatoes. Vitamin A: Fish pie has more than double the amount than the meat pie. Vitamin B12: fish pie has more than the meat pie meal. Vitamin C: the extra vegetables in the fish pie help to provide most	

		vitamin C making it a better choice with 64mg compared to only 5.9mg in the meat pie meal. Vitamin D provided by milk, fat: fish pie meal provides over twice as much as the meat pie meal, this will come mainly from the milk, fat. Calcium: a good amount 266mg is provided by the fish meal compared to only 27 mg in the meat pie meal. Salt: 9% of daily needs provided by the fish pie meal compared to a high 33% in the meat pie meal. Iron: similar amounts are found in both meals 2.7 mg in the fish pie compared to 2 mg in the meat pie meal. More will be needed elsewhere in the diet if daily needs are to be met. Evaluation Overall the fish pie provides the better for the dietary needs for an elderly person. This is true in both macro and micro nutrients. Energy/carbohydrates: elderly need fewer calories as they are less active. A diet high in calories could lead to obesity and related health problems, energy will come from the starch based carbohydrates. The sugar is low in both pies and is intrinsic not free sugar. Protein needed by elderly for maintenance and repair and as secondary source of energy. The protein is HBV and the fish pie helps to meet the Eatwell guidance of 2 portions of fish a week. Fats: meat pie is very high which could put elderly at risk of heart disease, strokes and obesity if eaten on a regular basis. Fish pie is a much better choice. The salmon will include omega 3 fatty acids which are better for health and help to prevent coronary heart disease. Vitamins A and C: are antioxidants and can help to prevent heart disease and some cancers. Vitamins A can help prevent age related eye conditions in the elderly. Vitamin C helps with general good health and fighting infections so valuable to the elderly. Vitamin B12: a good amount of B12 is thought to help the elderly by helping with memory, red blood cells and nerves. The fish pie is the better choice. Calcium and vit D: the fish pie is the best choice. Calcium is needed by the elderly for healthy teeth and bones both of which deteriorate with age. Vit D is needed to help the absorption of calcium, to prevent osteoporosis; many elderly have a diet that is deficient in vit D so there is a need to provide more elsewhere in the diet. Salt: the elderly are more susceptible to health conditions later in life and blood pressure needs to be at an acceptable level. Excess salt in the diet is a contributory factor to high blood pressure so low amounts of this are needed, Meat pie is particularly high.	
--	--	--	--

		Iron: the elderly need to maintain a good amount of iron in the diet to help prevent anaemia, to help with the absorption of vit C and to prevent gum disease. It is important to eat vit C and iron rich foods together both meals contain both nutrients. Accept other valid responses.	
--	--	---	--

03	2	Explain why dietary fibre is important in the body. Suggest ways the meat pie and roast potatoes can be modified to include more dietary fibre. Marking guidance This question is assessed against AO1. Students will demonstrate understanding of dietary fibre within the given meal <table><tr><td>Response shows thorough understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.</td><td>5-6 marks</td></tr><tr><td>Response shows good understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.</td><td>3-4 marks</td></tr><tr><td>Response shows basic understanding of dietary fibre, why it is needed and/or may identify ways of improving the fibre content of the meat pie and roast potatoes.</td><td>1-2 marks</td></tr><tr><td>No answer worthy of credit.</td><td>0 marks</td></tr></table> Marks awarded are not a 2 x 3 split but any combination. Extended answers creditable e.g. Bowel disease such as constipation Indicative content: Why dietary fibre is important in the body: • health and function of digestive system • supports weight control as slow energy release, feeling of fullness. • prevention of some bowel disease e.g. constipation, • diverticulitis, • cancer • lowers the risk of heart disease, type 2 diabetes • provides soluble fibre which reduces cholesterol level • fibre helps the removal of waste from the body. Ways of improving dietary fibre content of the meat pie and roast potatoes: • increase amount of wholemeal flour used in pastry/gravy • use of oats in the pastry • increase amount of vegetables in the pie e.g. carrots • leaving the skin on vegetables where possible • change the pastry lid to a crumble including wholemeal flour, oats, seeds nuts etc • serve jacket potatoes instead of roast potatoes. • replace meat with TVP, Quorn mycoprotein which are higher in fibre. • bulk out pie with pulses, beans	Response shows thorough understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.	5-6 marks	Response shows good understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.	3-4 marks	Response shows basic understanding of dietary fibre, why it is needed and/or may identify ways of improving the fibre content of the meat pie and roast potatoes.	1-2 marks	No answer worthy of credit.	0 marks	6
Response shows thorough understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.	5-6 marks										
Response shows good understanding of dietary fibre, why it is needed and can identify ways of improving the fibre content of the meat pie and roast potatoes.	3-4 marks										
Response shows basic understanding of dietary fibre, why it is needed and/or may identify ways of improving the fibre content of the meat pie and roast potatoes.	1-2 marks										
No answer worthy of credit.	0 marks										

		• replace potatoes with sweet potatoes which are higher in fibre. Do not accept accompaniments or desserts added to meal	
--	--	--	--

03	3	Explain the function of the following ingredients when making shortcrust pastry. Marking guidance This question is assessed against AO1. Students will demonstrate understanding of the use of different ingredients used in pastry making. Maximum of 2 marks for plain flour, 2 marks for fats Indicative content: Plain flour: • plain flour does not rise making pastry appearance flatter/prevents rising • the flour is the bulk ingredient and starch forms the structure of the pastry • low gluten content gives a short crumb texture as pastry is less elastic/stretchy. • Dextrinization /browning takes place in the oven Fats: • fats such as lard add short texture as fats coats the flour preventing gluten formation • fat prevents flour particles from absorbing water which gives a crumbly shorter texture • butter may improve sensory attributes such as colour and flavour Do not accept fat binding ingredients	4
----	---	--	---

04	1	Complete Table 2 below to match the sauce with the correct sauce making method. Marking guidance This question is assessed against AO1 Students will recall knowledge of sauce making methods. One mark for each correct match. • Hollandaise – emulsion. • Roux/all in one – starch/ starch based. • Tomato pasta – reduction.	3 (3 x 1 mark)
04	2	Give three reasons why it is important to stir a flour based sauce. Marking guidance This question is assessed against AO1 Students will recall knowledge of flour based sauces. • Even distribution of ingredients. • To prevent sticking. • To prevent burning/ browning. • For even cooking. • To prevent lumps/ smooth texture • To achieve the desired/correct consistency. • To allow for full gelatinisation/ thickening • Other relevant responses Award 1 mark for each correct point.	3

04	3	Explain how gelatinisation takes place when making a starch based sauce. Marking guidance This question is assessed against AO2. Students will apply their knowledge and understanding of gelatinisation to a given dish. <table><tr><td>Response shows thorough knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce. Details will include reference to at least one correct temperature for a stage.</td><td>5-6 marks</td></tr><tr><td>Response shows good knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.</td><td>3-4 marks</td></tr><tr><td>Response shows basic knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.</td><td>1-2 marks</td></tr><tr><td>No answer worthy of credit.</td><td>0 marks</td></tr></table> Indicative content: • starch granules in cold liquid sink to the bottom of the pan so need to be agitated/mixed • starch granules spread through the liquid before heating • the starch granules begin to absorb the liquid • when heated • at 60°C • starch granules begin to swell • as granules get bigger need regular stirring to prevent them sticking together and forming lumps • at 80°C • the granules will burst releasing the starch into the liquid • the starch thickens the mixture. • at 100°C • gelatinisation/thickening is complete • if sauce cools down a skin can develop and become a solid gel. • thickness depends on ratio of starch to liquid	Response shows thorough knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce. Details will include reference to at least one correct temperature for a stage.	5-6 marks	Response shows good knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.	3-4 marks	Response shows basic knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.	1-2 marks	No answer worthy of credit.	0 marks	6
Response shows thorough knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce. Details will include reference to at least one correct temperature for a stage.	5-6 marks										
Response shows good knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.	3-4 marks										
Response shows basic knowledge and understanding of the term gelatinisation and has applied this to a starch based sauce.	1-2 marks										
No answer worthy of credit.	0 marks										

04	4	Describe how the following raising agents work. Give an example of a recipe that uses each method. Marking guidance This question is assessed against AO2. Students will apply their knowledge and understanding of raising agents using the terms given. For each term the following marking guidance is given. 1 marks for raising agent 2 marks for description 1 mark for recipe Indicative content: Answers may relate to either or both types of chemical raising agents. Chemical raising agents: identify bicarbonate of soda or baking soda Description • when mixed with acidic ingredients (e.g. yoghurt, buttermilk, soured cream) produces CO₂ • if too much used gives an unpleasant taste and yellowish colour Recipes • used in strongly flavoured cakes e.g. gingerbread, sponges, scones, cakes, soda bread, honeycomb. identify baking powder made of bicarbonate of soda and an acid e.g. cream of tartar and a filler e.g. cornflour Description • added to SR flour by food manufacturers • when mixed with a liquid • it reacts and produces CO₂ Recipes • used in muffins, sponge, cakes. Related to both: • CO₂ raises the mixture • when CO₂ gas bubbles are released • help air bubbles in mixture expand • reaction is fast so dishes • must be mixed and put into oven quickly. Biological raising agents: identifies yeast as raising agents Description • when supplied with moisture, time, warmth and food (sugar, starch)	2 x 4 marks
----	---	---	-------------

		• breaks down food into carbon dioxide and alcohol • causes fermentation/yeast respires anaerobically • slow process • CO₂ gas causes bread to dough to expand when left in warm place for a time • yeast cells multiply and divide by budding • CO₂ bubbles expand with heat and produce steam and alcohol • alcohol evaporates in heat of oven so none left in final product • yeast cells will die if they come into contact with boiling water or salt Recipe • used in breadmaking, Chelsea buns, pizza, garlic bread, doughballs.	
--	--	---	--

05	1	Sales of organic food and drinks in the UK are growing. Analyse and evaluate why an increasing number of consumers are choosing organic food and drinks. Marking guidance This question is assessed against AO4. Students must analyse the factors that influence food choices. Evaluate reasons why more consumers are choosing organic foods <table><tr><td>Responses will include accurate and detailed factual explanations showing thorough knowledge and understanding of at least 4 different factors that relate to the increase in consumers choosing organic food and drinks</td><td>7-8 marks</td></tr><tr><td>There will be a good balance between analysis and evaluation</td><td></td></tr><tr><td>Analysis is excellent and makes reference to at least four different factors that relate to the increase in consumers choosing organic food and drinks</td><td></td></tr><tr><td>Evaluation will make sound judgements, linking analysis to an increase in organic food and drinks sales</td><td></td></tr><tr><td>Responses will include some detailed factual explanations showing knowledge and understanding of at least 3 different factors that relate to the increase in consumers choosing organic food and drinks</td><td>5-6 marks</td></tr><tr><td>Response may be stronger in either analysis or evaluation</td><td></td></tr><tr><td>Analysis is good and makes reference to three different factors relating to the increase in consumers choosing organic food and drinks</td><td></td></tr><tr><td>Evaluation will make some judgements, linking analysis to an increase in organic food and drinks sales</td><td></td></tr><tr><td>Response will include limited factual explanations which show basic knowledge and understanding of at least 2 factors that relate to the increase in consumers choosing organic food and drinks</td><td>3-4 marks</td></tr><tr><td>There may be an imbalance between analysis and evaluation where one aspect may be omitted or stronger</td><td></td></tr><tr><td>Analysis makes reference to two different factors</td><td></td></tr></table>	Responses will include accurate and detailed factual explanations showing thorough knowledge and understanding of at least 4 different factors that relate to the increase in consumers choosing organic food and drinks	7-8 marks	There will be a good balance between analysis and evaluation		Analysis is excellent and makes reference to at least four different factors that relate to the increase in consumers choosing organic food and drinks		Evaluation will make sound judgements, linking analysis to an increase in organic food and drinks sales		Responses will include some detailed factual explanations showing knowledge and understanding of at least 3 different factors that relate to the increase in consumers choosing organic food and drinks	5-6 marks	Response may be stronger in either analysis or evaluation		Analysis is good and makes reference to three different factors relating to the increase in consumers choosing organic food and drinks		Evaluation will make some judgements, linking analysis to an increase in organic food and drinks sales		Response will include limited factual explanations which show basic knowledge and understanding of at least 2 factors that relate to the increase in consumers choosing organic food and drinks	3-4 marks	There may be an imbalance between analysis and evaluation where one aspect may be omitted or stronger		Analysis makes reference to two different factors		8
Responses will include accurate and detailed factual explanations showing thorough knowledge and understanding of at least 4 different factors that relate to the increase in consumers choosing organic food and drinks	7-8 marks																								
There will be a good balance between analysis and evaluation																									
Analysis is excellent and makes reference to at least four different factors that relate to the increase in consumers choosing organic food and drinks																									
Evaluation will make sound judgements, linking analysis to an increase in organic food and drinks sales																									
Responses will include some detailed factual explanations showing knowledge and understanding of at least 3 different factors that relate to the increase in consumers choosing organic food and drinks	5-6 marks																								
Response may be stronger in either analysis or evaluation																									
Analysis is good and makes reference to three different factors relating to the increase in consumers choosing organic food and drinks																									
Evaluation will make some judgements, linking analysis to an increase in organic food and drinks sales																									
Response will include limited factual explanations which show basic knowledge and understanding of at least 2 factors that relate to the increase in consumers choosing organic food and drinks	3-4 marks																								
There may be an imbalance between analysis and evaluation where one aspect may be omitted or stronger																									
Analysis makes reference to two different factors																									

	relating to the increase in consumers choosing organic food and drinks Evaluation will make basic judgements, linking analysis to an increase in organic food and drinks sales	
	Responses will include few factual explanations showing little knowledge and understanding of why increasing numbers of consumers are choosing organic foods Analysis is limited and makes reference to only one factor relating to the increase in consumers choosing organic food and drinks sales Evaluation makes limited judgements with little attempt to link to analysis	1-2 marks
	No answer worthy of credit.	0 marks

Indicative content:

Analysis and Evaluation:

- taste preferences - some people believe that the sensory properties of food are improved by not using chemical fertilisers etc.
- personal preferences – choosing foods a person believes to be produced in an ethical/ more natural way
- health – choosing foods that do not use artificial fertilisers and pesticides may be better for health
- costs – e.g. paying a fair price for food. Organic foods have become less expensive over recent years
- media - promotion of ethical food choices may encourage people to buy, promotion of market trends.
- food labelling – consumer awareness of soil association labels which is associated with quality and natural growing
- availability – increased number of outlets selling organic foods e.g. supermarkets, local shops, independent shops, catering establishments, deliveries from farms
- ethical choice – consumers believe that they are supporting farmers in producing good quality food
- food miles – consumers are encouraged to buy food with low food miles, many local farms produce organic produce
- environmental concerns:
 - care about the environment and natural wildlife that develops in organic farming
 - organic food is better for the environment as many pesticides used in conventional/intensive farming don't break down in water
 - farmers add organic matter e.g. manure instead of artificial fertilisers. Artificial fertilisers are made from non-

		renewable resources - Chemical pesticides are not used and natural predators are encouraged - Choose organic to avoid genetically modified ingredients which are not allowed in organic foods • animal welfare – free range and organic foods are better for animal welfare. Animals raised as organic must have a 100% organic diet. Organic animals are not given growth hormones, so grow naturally.	
--	--	---	--

05	2	Explain the advantages and disadvantages of Genetically Modified (GM) foods. Marking guidance This question is assessed against AO2. Students will apply their knowledge and understanding of GM foods. Each section is marked of 3 marks as follows with benefit of doubt given if an answer is in incorrect section. <table><tr><td>3 points made or 2 extended answers</td><td>3 marks</td></tr><tr><td>2 points made or 1 extended answer</td><td>2 marks</td></tr><tr><td>1 point made</td><td>1 mark</td></tr><tr><td>No answer worthy of credit.</td><td>0 marks</td></tr></table> Indicative content: Advantages: • better resistance to pests and diseases • faster or stronger growth rates • can have improved nutrient content e.g. vitamin A, Golden rice • more intense flavour • more intense colour • can be produced in larger amounts/greater yields • can benefit people who live in areas where food is difficult to grow/developing world • food becomes cheaper in long term • need less pesticides and herbicides • food has longer storage life e.g. tomatoes • food can survive extremes of weather e.g. drought • food can be grown out of season • examples of specific GM foods may be given to support response e.g. pinker salmon, golden rice. Disadvantages: • seeds are expensive • consumers may not trust scientifically produced foods • pollen may mix with wild plants which could affect natural species • technology needed may affect animal habitats and food sources • pests may become resistant • fear that new diseases will develop as bacteria and viruses may be used in production • confusing labelling as some below 1% do not have to be labelled • consumers believe it is unethical to interfere with natural species • possibility that some people may be sensitive to GM foods	3 points made or 2 extended answers	3 marks	2 points made or 1 extended answer	2 marks	1 point made	1 mark	No answer worthy of credit.	0 marks	6
3 points made or 2 extended answers	3 marks										
2 points made or 1 extended answer	2 marks										
1 point made	1 mark										
No answer worthy of credit.	0 marks										

		• farmers in developing countries can be locked into deals with larger GM companies • the effects of GM crops on the natural ecology and environment of an area where they are grown e.g. superweeds • long-term effects not yet known • interfering with the natural process of plant and animal reproduction • possibility of some people becoming allergic to specific GM foods particularly a characteristic that has been added • it is not possible to tell by looking at a product whether it is GM or not, it must be stated on the label • any other relevant response.	
--	--	--	--

06	1	Explain how the different heat treatment methods: • allow milk to last longer. • affect the nutrition, taste and appearance of milk. Marking guidance This question is assessed against AO2. Students will apply their knowledge and understanding of the primary processing of milk. Each section is marked of 3 marks as follows with benefit of doubt given if an answer is in incorrect section. <table><tr><td>3 points made or 2 extended answers</td><td>3 marks</td></tr><tr><td>2 points made or 1 extended answer</td><td>2 marks</td></tr><tr><td>1 point made</td><td>1 mark</td></tr><tr><td>No answer worthy of credit.</td><td>0 marks</td></tr></table> Indicative content: Allow milk to last longer: • heat treatment kills pathogenic bacteria • makes the milk safe to drink UHT milk • very high temp for very short time leads to a longer shelf-life • packaged in sterile containers which also extends life time • milk can last several months and stored unopened at ambient (room) temperature sterilised milk • can be stored unopened at ambient (room) temperatures for months • once open treat as fresh milk and use in 5 days Pasteurised milk • if stored in refrigerator will keep for 5 days. Affect the nutrition, taste and appearance of milk only: Pasteurised: • does not significantly affect the taste or appearance • little effect on nutrition Sterilised: • milk to darken in colour/ caramelisation • change in flavour caused by effect of heat on natural sugar (lactose) sweeter. • protein denatured	3 points made or 2 extended answers	3 marks	2 points made or 1 extended answer	2 marks	1 point made	1 mark	No answer worthy of credit.	0 marks	6
3 points made or 2 extended answers	3 marks										
2 points made or 1 extended answer	2 marks										
1 point made	1 mark										
No answer worthy of credit.	0 marks										

		• Vitamin B1 and B12 lost UHT: • change in flavour • slight colour change • little effect on nutrition – B12 lost over time	
--	--	--	--

06	2	Food additives are used in many processed foods. • Explain why additives are used in food processing. • Explain some of the concerns people have about their use. Marking guidance This question is assessed against AO2 Students will apply their knowledge and understanding of the use of additives in processed foods. Each section is marked of 3 marks as follows with benefit of doubt given if answer is in incorrect section. <table><tr><td>3 points made or 2 extended answers.</td><td>3 marks</td></tr><tr><td>2 points made or 1 extended answer</td><td>2 marks</td></tr><tr><td>1 point made</td><td>1 mark</td></tr><tr><td>No answer worthy of credit.</td><td>0 marks</td></tr></table> Indicative content: Food additives are used in processing to: • improve the quality of the product • improve sensory aspects improve flavour .e.g. sweeter • improve colour/appearance • improve shelf life e.g. preservatives • improve texture /stability of food e.g. emulsifiers/stabilisers • to reduce sugar intake e.g. sweeteners. Concerns: • allergies, some people need to avoid • some sweeteners cause digestive upsets • people become more use to enhanced flavours and cannot appreciate natural flavours in foods • hyperactivity in children caused by some colourings • larger amounts of salt can affect health (blood pressure) • monosodium glutamate in ready meals may disguise true taste. • unknown effects on body of hidden additives • addiction can lead to obesity • used to disguise inferior ingredients.	3 points made or 2 extended answers.	3 marks	2 points made or 1 extended answer	2 marks	1 point made	1 mark	No answer worthy of credit.	0 marks	6
3 points made or 2 extended answers.	3 marks										
2 points made or 1 extended answer	2 marks										
1 point made	1 mark										
No answer worthy of credit.	0 marks										