2013 Health and Food Technology

Higher

Finalised Marking Instructions

Part One: General Marking Principles for Health & Food Technology Higher

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 specific Marking Instructions for each question.

(a) Marks for each candidate response must always be assigned in line with these general marking principles and the specific Marking Instructions for the relevant question. 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/Principal Assessor.

(b) Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.

GENERAL MARKING ADVICE: Health & Food Technology Higher

The marking schemes are written to assist in determining the "minimal acceptable answer" rather than listing every possible correct and incorrect answer. The following notes are offered to support Markers in making judgements on candidates' evidence, and apply to marking both end of unit assessments and course assessments.

Part Two: Marking Instructions for each Question

Section A – Short Response Questions

Question			Expected Answer/s	Max Mark	Additional Guidance
1			1. Food 2. Warmth (5 − 63ºC.) 3. Moisture 4. Time 5. Oxygen 6. PH. 1 mark for correct condition	**1**	
2			1. Blackcurrants 2. Rosehips 3. Green peppers 4. Kiwi fruits 5. Oranges 6. Lemons 7. Grapefruit 8. Limes 9. Strawberries 10. Cabbage 11. Spinach 12. Brussels sprouts 13. Broccoli 14. Bean sprouts 15. Peas 16. Potatoes. Accept other relevant answers 1 mark for correct food source	**1**	
3			1. Liver/liver products 2. Raw/partially cooked egg 3. Raw egg dishes/homemade mayonnaise/ mousse/ice cream 4. Raw/cured meat/fish accept examples 5. Soft rind cheese/Brie/Camembert 6. Unpasteurised milk/cheese/yoghurt/goats cheese 7. Pate (liver/vegetable) 8. Soft blue vein cheese/Danish blue/ Gorgonzola/ Roquefort 9. Shark/sword fish/marlin/fresh tuna 10. Nuts 11. Alcohol. 1 mark for correct identification of food	**1**	

Question			Expected Answer/s	Max Mark	Additional Guidance
4			1. Nutritional information 2. Bar codes 3. Microwave labelling scheme 4. Vegetarian/allergy symbols 5. Organic labels 6. Star ratings for refrigerator/freezer 7. Recycling symbols 8. Green labels. 9. Other valid voluntary information 1 mark for correct identification of voluntary information	**1**	
5			1. Basal metabolic rate 2. Age 3. Gender/sex 4. Weight/height/body size 5. Lifestyle/physical activity level (PAL) 6. Occupation 7. Pregnancy 8. Lactation 9. Convalescence 10. Weight reduction 11. Vegetarianism 12. State of health. 1 mark for correct factor	**1**	
6			Non-milk extrinsic sugars 1 mark for correct abbreviation	**1**	
7			1. Bread 2. Cheese 3. Yoghurts 4. Fish sauce 5. Soy sauce 6. Salami 7. Pepperoni 8. Alcohol 9. Vinegar. Accept other relevant answers 1 mark for correct food product	**1**	

Question			Expected Answer/s	Max Mark	Additional Guidance
8			1. Unfair commercial practices 2. Misleading actions 3. Misleading omissions 4. Aggressive practices 5. Accept any of the (31 Specific banned practices related to the four points above). 1 mark for correct area	**1**	
9			1. Required for all body fluids/hydration/prevents dehydration/aids concentration 2. Assists the removal of waste from the body 3. Combines with NSP to prevent constipation/ bowel disorders 4. Helps maintain body temperature 5. Lubricates joints/membranes 6. Required to carry nutrients to the cells 7. Keeps linings of mucous membranes/digestive tract/bronchial tubes moist 8. Needed to dissolve some nutrients. 1 mark for each correct function	**1**	
10			1. Improve the nutritional value of foods 2. Help lower blood cholesterol 3. Contributes to reducing CHD/cancers 4. Promotes good intestinal health/ encourages a healthy bowel 5. Protects against breast cancers 6. Improve physical endurance/energy boost. 1 mark for each correct benefit	**2**	
11			1. Smoking 2. Hereditary/race 3. Lack of exercise 4. Stress 5. Gender 6. Type 1 diabetes. 1 mark for each correct factor	**2**	

Question			Expected Answer/s	Max Mark	Additional Guidance
12			1. **New** foods should be introduced gradually 2. A wide variety of foods/textures/flavours should be introduced 3. Foods should be lump free/pureed/sieved 4. No salt/should be added to foods/restrict salt intake 5. Regular eating patterns should be established 6. Milk/water should be given as a drink 7. By six months foods should have some lumps 8. Try and avoid additives 9. Restrict the intake of sugar/no sugar added 10. Food should be at the correct temperature. 1 mark for each correct point of advice	**2**	
13			1. To gain ideas for food products 2. To gain an insight of a competitors food products 3. To check/compare the quality of food product(s) 4. To assess an existing food product 5. To develop a new style of packaging/ labelling for the food product 6. To produce a specification for a new food product 7. To ensure consumers are satisfied with the food product 8. To establish the functions of ingredients in the food product 9. To correct problems that have occurred in the manufacturing process of the food product 10. To understand the reactions of foods when mixed with other ingredients.	**2**	

Question			Expected Answer/s	Max Mark	Additional Guidance
14			**Advantages** 1. Provides an increased range of food products 2. TVP/soya increases food choice for vegetarians 3. Provides a wide variety of flavours/shapes/ textures to food products 4. Provides the diet with NSP/prevents bowel disorders/constipation 5. Raw materials can be cheap reducing food costs 6. Can be kept for a long time 7. Unpalatable foods (such as soya beans) can be made into nutritious food products 8. Makes starch more digestible/allows glucose to enter the blood stream quicker 9. Can be made without the addition of fats/ helping to meet a healthy diet/meet SDT. 1 mark for correct advantage **Disadvantage** 1. Some products have been deep fried/high in fat 2. Extrusion cooking (of high fibre blended flour) may increase bacterial fermentation in the colon/may depress appetite 3. (Many snack) foods produced by extrusion may be high in salt 4. Expensive products could be produced from cheaper products. 1 mark for correct disadvantage	**2**	

Section B

Question			Expected Answer/s	Max Mark	Additional Guidance
1	**a**		6 x 1 mark for each point of evaluation which makes reference to the needs of an **active female teenager.** **Opinion** **positive/negative higher/ lower than RNI/EAR** **Fact** **function of nutrient/fact about nutrient** **Consequence** **consequence of the fact for the active female teenager**	**6EV**	
		1	**Energy (is lower)**		
			Negative		
		N	1. Energy intake is **low** which is bad as the **female teenager** (**is active** and) requires energy for exercise/physical activity **therefore** she will feel tired/exhausted/ unable to cope with activities.		
		N	2. Energy intake is **low** which is bad as the **female teenager** (**is active** and) requires energy for exercise/physical activity **therefore** (if she continues with a low intake) and remains active she may become underweight.		
			Positive		
		P	3. Energy intake is **low** which is good as the **female teenager** (**is active** and) requires energy for exercise/physical activity **therefore** (if she continues with a low intake) she will avoid putting on weight/becoming obese.		

Question			Expected Answer/s	Max Mark	Additional Guidance
		2	**Protein intake (is higher)** **Positive**		
		P	1. Protein intake is **higher** which is good as the **active female teenager** can use excess protein as a secondary source of energy **therefore** helping to compensate her low energy intake/ preventing feeling weak/tired.		
		P	2. Protein intake is **higher** which is good for the **active female teenager** as it would help with growth and development/ maintenance of her body tissue **therefore** at a time of rapid growth will ensure proper development/maintenance.		
		P	3. Protein intake is **higher** which is good as the **active female teenager** because it is required for tissue repair **therefore** if she falls/injures herself during activities it will help ensure tissue heals itself quickly.		
		P	4. Protein intake is **higher** which is good for the **active female teenager** as it could aid the absorption of calcium **which** is necessary for development of strong teeth/bones/helps prevent osteoporosis/osteomalacia in later life.		
		3	**Vitamin B2 (is higher)** **Positive**		
		P	1. The days intake is **high** this is good as Vitamin B2 is required for the release of energy from carbohydrates/protein/fat/food **therefore** the **active female teenager** may not feel tired when taking part in activities.		
		P	2. Vitamin B2 intake is **high** this is good for the **active female teenager** as it is essential for normal growth **therefore** at a time of rapid growth it will help ensure proper development.		
		P	3. Vitamin B2 intake is **high** this is good for the **active female teenager** as it is water soluble **so** will be excreted from the body if not used.		

Question			Expected Answer/s	Max Mark	Additional Guidance
		4	**Vitamin A (is higher)** **Positive**		
		P	1. Vitamin A intake is **high** this is good as it is required for good vision/manufacture of visual purple **therefore** the **active female teenagers** vision will not be impaired particularly in dim light/suffer from night blindness.		
		P	2. Vitamin A intake is **high** this is good as it is one of the anti-oxidant vitamins **therefore** the **active female teenager** will be at a reduced risk of cancer/heart disease in later life.		
		P	3. Vitamin A intake is **high** this is good as it is required to keep mucous membranes in the eyes/lungs/throat/digestive tract moist/free from infection **therefore** the **active female teenager** will have a resistance to infection.		
		P	4. Vitamin A intake is **high** this is good as it is required for the maintenance of healthy skin **therefore** the **active female teenager** will be less likely to suffer from spots/acne.		
		P	5. Vitamin A intake is **high** this is good as it is required for normal growth in children **therefore** this will ensure the **active female teenager** who is still growing will develop correctly.		
			Negative		
		N	6. Vitamin A intake is **high** which may be bad if the **active female teenager** was pregnant **as** large amounts can be harmful to the developing baby which may result in birth defects.		
		N	7. Vitamin A intake is **high** which may be bad for the **active female teenager** as too much vitamin can be toxic **so** she may suffer from skin disorders/poor liver function/bone/muscle pain if high intake continues.		

Question			Expected Answer/s	Max Mark	Additional Guidance
		5	**Iron (is lower)** **Negative**		
		N	1. Iron intake is **low** which is bad as it is required for the production/formation of haemoglobin/red blood cells **which** may lead to the **active female teenager** suffering from anaemia/ tiredness/exhaustion.		
		N	2. Iron intake is **low** which is bad as it is required for the production/formation of haemoglobin/red blood cells which the **active female teenager** may lose through menstruation **therefore** at a greater risk of suffering from anaemia.		
		N	3. Iron intake is **low** which is bad as it is required for the production of haemoglobin/red blood cells which transports oxygen **therefore** during **activity** the **female teenager** may have a lack of energy/feel tired/exhausted/ breathless.		
		6	**Calcium (is lower)** **Negative**		
		N	1. The calcium intake is **low** which is bad for the **active female teenager** as calcium is needed for strong bones **so** a shortage may lead to poor bone formation/if prolonged osteomalacia/osteoporosois in later life.		
		N	2. The calcium intake is **low** which is bad for the **active female teenager** as calcium is needed for strong teeth **so** a lack could lead to poor teeth formation/dental caries.		
		N	3. The calcium intake is **low** which is bad for the **female teenager** as calcium is needed for correct functioning of muscles/ nerves **so** during activity she may suffer from muscle cramps/ pain/spasms.		
		N	4. The calcium intake is **low** which is bad for the **female teenager** as calcium is needed for blood clotting **so** if an accident occurs during activity she may be at risk of greater blood loss/ anaemia.		

Question			Expected Answer/s	Max Mark	Additional Guidance
		7	**NSP (is higher)** **Positive**		
		P	1. The days intake of NSP is **high** this is good as NSP is required to eliminate waste so the **active female teenager** will be at less risk of developing constipation/ diverticulitis/bowel cancer/bowel disorders		
		P	2. The days intake of NSP is **high** this is good as NSP helps control blood sugar levels in the **active female teenager** so energy is released slowly/steadily which/ will prevents sudden feeling of tiredness/ lack of energy during/ diabetes.		
		P	3. The days intake of NSP is **high** this is good as NSP helps control cholesterol so if the **active female teenager** continues with intake she may be at reduced risk of heart disease in later life.		
		P	4. The days intake of NSP is **high** this is good for the **active female teenager** as NSP absorbs LDL **so** reducing the risk of heart disease.		
		P	5. The days intake of NSP is **high** this is good as NSP can provide a feeling of fullness **so** the **active female teenager** is less likely to snack on high fat/high sugar foods/put on weight.		
			Negative		
		N	6. The days intake of NSP is **high** this is bad as NSP can hinder the absorption of iron/calcium **which** could lead to a deficiency of this nutrient/anaemia/ tiredness/weakness/osteoporosis in later life in the **active female teenager.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	**b**		3 x 1 mark for **each** factor 3 x 1 mark for **each** explanation which identifies how the dietary factor contributes to obesity. Factor must be identified before mark can be awarded for explanation. Where factor is incorporated in the explanation this can be credited	**6KU**	
		1	**Factor – High sugar diet.** **Explanation** 1. A high intake of sugar in the diet will provide the body with extra calories/energy contributing to **obesity** 2. Sweets/chocolates may contain high quantities of sugar and (if eaten regularly) will provide the body with extra calories/energy contributing to **obesity** 3. Drinks with added sugar provide the body with extra calories/energy contributing to **obesity**		extra calories = energy
		2	**Factor – High fat intake.** **Explanation** 1. Fat in the diet will provide body with extra energy/calories contributing to **obesity** 2. Fast food tends to contain fat sugar and (if eaten regularly) will provide the body with extra calories contributing to **obesity** 3. Snacks tend to contain fat and (if eaten regularly) will provide the body with extra calories contributing to **obesity** 4. Animal products tend to contain fat and (if eaten regularly) will provide the body with extra calories contributing to **obesity** 5. Cream cakes/sugary doughnuts contain fat and (if eaten regularly) will provide the body with extra calories contributing to **obesity** 6. Frying foods in fat (on a regular basis) will add additional fat providing the body with extra calories contributing to **obesity.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	b		**(cont)**		
		3	**Factor – Low intake of fruit/vegetables.** **Explanation** 1. Instead of eating fruit/vegetables people may snack on high fat/high sugar foods which will provide the body with extra calories contributing to **obesity** 2. Fruit/vegetables may not be purchased in the home therefore high fat/high sugar foods may be eaten instead which will provide the body with extra calories contributing to **obesity** 3. Fruit/vegetables add bulk to the diet/are filling so if they are not eaten regularly people may eat high fat/high sugar foods which will provide the body with extra calories contributing to **obesity**.		
		4	**Factor – Diet high in total energy/ large portion sizes/calories.** **Explanation** 1. If more energy is consumed in a day's intake than output of energy (then over a prolonged period of time) this may be stored in the body as fat contributing to **obesity** 2. Large portion sizes may increase the calorie/ energy intake contributing to **obesity.**		
		5	**Factor – Diet low in NSP/total complex carbohydrates.** **Explanation** 1. NSP/total complex carbohydrate add bulk to the diet/are filling so if they are not eaten regularly people may snack on high fat/high sugar foods which may contribute to **obesity.**		
		6	**Factor – Diet high in pre-prepared convenience meals.** **Explanation** 1. Some households consume lots of pre-prepared convenience meals which can be high in fat/ sugar/energy so contribute to **obesity**		
		7	**Factor – Diet high in take away meals.** **Explanation** 1. More takeaways/fast food meals are eaten now and as these can be high in sugar/fat/energy this may contribute to **obesity.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	**b**		**(cont)**		
		8	**Factor – Poor food choice.** **Explanation** 1. Poor eating habits may have been formed in early childhood which may lead to consumption of high fat/sugar foods contributing to **obesity** 2. Consumption of high fat/sugar snacks may be eaten in preference to regular meals which may contribute to **obesity** 3. "Grazing" is more common, often on high/fat/ sugar/energy snacks which may contribute to **obesity**		
		9	**Factor – Missing meals.** **Explanation** 1. Skipping meals regularly may result in a feeling of hunger this could cause overeating/binge eating of energy rich foods at a later meal which may contribute to **obesity.**		
		10	**Factor – High alcohol intake.** **Explanation** 1. A high intake of alcohol may increase calorie/ sugar intake and contribute to **obesity.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	**c**		4 x 1 mark for **each** point of evaluation which makes reference to **bread** in the diet. **Opinion positive/negative** **Fact about the contribution of bread** **Consequence of the fact for the diet/health** **Positive**	**4EV**	
		P	1. **Bread** is a good addition to the diet **because** it provides protein for the body **therefore** allowing growth and repair and maintenance of body cells/secondary source of energy.		
		P	2. **Bread** is a good addition to the diet **as** it is fortified with calcium **which** is needed for the development and maintenance of bones and teeth.		
		P	3. **Wholemeal bread** plays a good part in the diet **as** it is a good source of NSP, **which** helps to prevent constipation/ diverticular disease/bowel cancer/removes waste/haemorrhoids/ piles/ bowel disorders.		
		P	4. **Bread** plays a good role in the diet **because** it may contribute to folic acid **which** is needed to prevent spina bifida/neural tubes defects in babies.		
		P	5. **Bread** is a good addition to the diet **because** it may contain folic acid **which** helps to prevent anaemia.		
		P	6. **Bread** plays a good role in the diet **as** it contributes to iron intake/is fortified with iron **therefore** helping to prevent anaemia.		
		P	7. **Bread** is a good addition to the diet **as** it is low in fat **therefore** should not cause excess weight gain/obesity/high blood pressure/Coronary Heart Disease.		
		P	8. **Bread** is a good addition to the diet **as** it is low in sugar **therefore** should not cause excess weight gain/obesity/high blood pressure/ Coronary Heart Disease/tooth decay/diabetes.		
		P	9. **Bread** is a good addition to the diet **as** it helps to fill you up **therefore** you are less likely to snack on high fat/sugar/salty foods which can lead to obesity/high blood pressure.		
		P	10. **Bread** is a good addition to the diet **because** it is relatively cheap to buy **therefore** can provide an inexpensive source of protein/carbohydrate.		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	c		**(cont)**		
		P	11. **Bread** is a good addition to the diet **as** it helps to meet the dietary target for an increase in bread consumption from 106g per day to 145g per day (mainly using wholemeal and brown breads) **therefore** contributing to good health.		
		P	12. Bread is good for diabetics **as** it contains total complex carbohydrate **which** helps to regulate blood sugar.		
		P	13. **Bread** is a good addition to the diet **as** it provides carbohydrate **which** is a source of energy for activity/people involved in sports.		
		P	14. **Bread** is a good addition to the diet **as** it provides slow release energy **which** aids concentration/helps control blood sugar levels.		
		P	15. Some **breads** are now fortified with omega 3 **which** may be good for children **as** this may help the development of their brain.		
		P	16. **Bread** is a good addition to the diet **as** it may be fortified with omega 3 **which** may help lower risk of Coronary Heart Disease/ rheumatoid arthritis.		
		P	17. **Bread** contains salt **which** may be good as salt contributes to muscle/nerve activity/body fluid balance.		
			Negative		
		N	1. Bread may be a bad option in a healthy diet as if a spread containing high amounts of saturated fat is used this will contribute towards obesity/ Coronary Heart Disease.		
		N	2. Bread may be a bad option in a healthy diet if the filling/topping is high in saturated fat as this may lead to obesity/Coronary Heart Disease.		
		N	3. Bread may be a bad option in a healthy diet if the filling/topping is high in sugar as this may lead to obesity/Coronary Heart Disease/dental caries.		
		N	4. Consumption of white bread may be bad as it is low in NSP therefore leading to constipation/ diverticular disease/bowel cancer/haemorrhoids/ piles/bowel disorders.		
		N	5. Bread can be a bad addition to the diet as it may contains high amounts of salt which may lead to high blood pressure.		
		N	6. Bread may be a bad addition to the diet if someone is suffering from allergies/ intolerances/Coeliac disease as the bread may trigger the allergy due to its ingredients.		
		N	7. Bread can be a bad addition to the diet as contains CHO which if eaten in excess can contribute to obesity.		

Question			Expected Answer/s	Max Mark	Additional Guidance
1	**d**		4 x 1 mark for the effect of heat on **fat/sugar** Minimum of one mark to come from **each** fat/sugar	**4 KU**	
		1	**Fat** 1. When heated solid fat melts to a liquid 2. Fats break into fatty acid and glycerol at high temperatures (200ºC)/just below smoking point. 3. When fat is heated it produces a blue haze/ smoke. 4. If fat continues to be heated it will ignite/burn rapidly. 5. If oil is overheated the nutritional quality will be reduced. 6. If oil is overheated the keeping quality will be reduced. 7. Smoking shows the chemical structure of fat is beginning to break down if the fat is heated it will go rancid.		
		2	**Sugars** **Dry Heat** 1. Sugar first melts/then caramelises/finally burns. 2. Sugar contributes to the golden brown colour of baked items/caramelisation. 3. Dry heat forms a golden brown crust. **Moist Heat** 1. When heated sugar dissolves in liquid. 2. Prolonged heating of sugar results in syrup. 3. Sugar syrup will caramelise/burn.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**a**		3 x 1 mark for identification of **each** stage. 3 x 1 mark for each explanation linked to the development of the **new soup**. The stage must be identified before mark can be awarded for explanation. Where the stage is incorporated in the explanation this can be credited.	**6KU**	
		1	**Stage – Concept Generation** **Explanation** 1. This is when the company will develop ideas for the **new soup.** 2. This is the thinking stage/thinking up new ideas for the **new soup.** 3. The development of ideas from market research, for a **new soup.** 4. Disassembly (of a popular existing soup) can establish why certain characteristics are popular/help manufacturer generate new ideas for the **new soup** 5. The **new soup** has to be different to existing products so this ensures the manufacturer does not replicate existing soups. 6. The cost/portions size/methods of cooking/ reheating/flavour/texture/ appearance of the **new soup** can be considered.		
		2	**Stage – Concept screening** **Explanation** 1. All ideas for the **new soup** are considered – some are kept and some are discarded. 2. A specification is compiled for a **new soup.** 3. The specification allows the manufacturer to discard ideas that do not meet the specification for a **new soup.**		
		3	**Stage – Prototype production** **Explanation** 1. The prototype/example/sample **new soup** is developed. 2. The prototype/example/sample **new soup** is measured against the specification. 3. The prototype/example/sample **new soup** is tested for appeal and may be further modified/ rejected. 4. It enables testing to be carried out to avoid costly mistakes before the production run of the **new soup.** 5. The production run for the **new soup** is tested so the processes can be checked.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**a**		**(cont)**		
		4	**Stage – Product testing** **Explanation** 1. A range of **new soups** are tested by the target market/various age groups/tasting panels so options can be obtained. 2. Sensory testing of the **new soup** allows for changes to be made/improvements/ modifications of the recipe as a result of consumer opinion. 3. A prototype of the **new soup** is trialled.		
		5	**Stage – Information and advertising materials designed for packaging** **Explanation** 1. Food labels in compliance with food labelling regulations will be designed for the **new soup.** 2. Suitable packaging will be developed/ investigated/priced and produced for the **new soup.** 3. The legal and advertising team will begin to develop materials/plan for selling the **new soup.** 4. Allows the advertising team to cost the advertising programme and the packaging of the **new soup**.		
		6	**Stage – First production run** **Explanation** 1. The **new soup** will be produced in bulk in a factory/system and can be assessed. 2. Quality assurance will be carried out to ensure the **new soup** is an acceptable standard for sale. 3. This is an important stage in the manufacture of the **new soup** as it affects other stages. 4. If ingredients need to be changed then the label of the **new soup** will need changed.		
		7	**Stage – Marketing plan** **Explanation** 1. The marketing team will meet to decide about the pricing of the **new soup** (low cost to indicate value product/high cost to indicate luxury product). 2. An advertising plan is created to help launch the **new soup**. 3. The marketing team meet to decide a range of ways to promote the **new soup**.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**a**		**(cont)**		
		8	**Stage - Launch** **Explanation** 1. The **new soup** is now on sale. 2. Depending on the budget available will affect how they choose to launch the **new soup**. 3. Piloting of the **new soup** may be carried out to gauge the success of the product/ monitor initial sales. 4. Food exhibitions/store launch/press release may be selected as the most suitable method to launch the **new soup**. 5. A range of promotional techniques may be used to promote the sale of the **new soup**. 6. Market research will be carried out to check the sales figures of the **new soup.**		
2	**b**		5 x 1 mark for **each** valid point linked to the suitability of the **soup** for the **elderly** **Opinion** **positive/negative** **Fact** **showing understanding of the rating from the profile indicating high/low – not just the number** **Consequence** **of the rating to the needs of the elderly**	**5EV**	
		1	**Colour (2 low)** **Positive**		
		P	The **soup** has a low score for colour which may be **good** for the **elderly** as it may show that it has no artificial colourings in it **therefore** reducing the risk of allergic reactions.		
			Negative		
		N	1. The colour scored low for the **soup**, (this may suggest it has a poor colour) **which may not appeal** to the **elderly as** they may be attracted to foods with brighter colours.		
		N	2. The colour of the **soup** scored low for colour this **may not appeal** to the **elderly** as they may have poor sight **so** not be attracted to the soup.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**b**		**(cont)**		
		2	**Aroma (4 high)**		
			Positive		
		P	1. The **soup** has a high score for aroma (which may suggest it has a strong smell) which may be good for the **elderly as** they may like/find appealing the smell of the ingredients/be encouraged to try it.		
		P	2. The **soup** has a high score for aroma which may be **good** for the **elderly** as they may have poor sense of smell **so** this would ensure they could smell it/ encourage them to try it.		
			Negative		
		N	1. As the **soup** has a high score for aroma this may be **bad as** if the **elderly** person does not like the smell they may choose not to eat it.		
		3	**Saltiness (2 low)**		
			Positive		
		P	1. The **soup** has a low score for saltiness which is **suitable** for the **elderly** person **as** it will reduce their risk of hypertension/stroke/CHD.		
		P	2. The **soup** has a low score for saltiness which is **good** for the **elderly** as it will help them to meet the current dietary target for salt.		
		P	3. The low score for saltiness will make the **soup suitable** for the **elderly** as too much salt can remove calcium for the bones **therefore** this reduces their risk of osteoporosis/osteomalacia.		
			Negative		
		N	1. The low score for saltiness may make the **soup unappealing** for the **elderly** as they may enjoy highly seasoned/ flavoured foods, **therefore** they may not want to eat the soup.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	b		**(cont)**		
		4	**Thickness (4 high)**		
			Positive		
		P	1. The **soup** has a high score for thickness which may make it **suitable** for the **elderly** as they may have poor co-ordination so may find eating liquids difficult **so** this will allow them to enjoy the soup without making a mess/eat soup more easily.		
		P	2. The **soup** has a high score for thickness which may indicate the food is filling for the **elderly** person which is **good** as it will help prevent snacking **therefore** reducing the risk of CHD/obesity.		
			Negative		
		N	1. The high score for thickness may make the **soup** unsuitable as it may indicate the soup has lumps, which is **bad** as it may cause the **elderly** person to choke/have difficulty swallowing.		
		5	**Smoothness (1 very low)**		
			Positive		
		P	1. The **soup** has a very low score for smoothness (indicating that there may be lumps/vegetable pieces) which may **appeal** to the **elderly as** they may like the texture of vegetable pieces in their soup.		
		P	2. The very low score for smoothness in the **soup** this will be **good** for the **elderly as** it may contain NSP which could help reduce the elderly persons risk of constipation/bowel disorders		
		P	3. As the **soup** has a very low score for smoothness this indicates that the soup may contain vegetables, this is **good** for the **elderly** person **as** it will help them to meet the current dietary targets for increasing fruit and vegetables.		
			Negative		
		N	1. The **soup** has a very low score for smoothness which may make it **unappealing** for the **elderly as** they may not like the texture of pieces in their soup.		
		N	2. The **soup** has a very low score for smoothness which means it is likely to be lumpy/thick which may be **unappealing** to the **elderly as** they may find it difficult to swallow.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**b**		**(cont)**		
		6	**Spiciness (5 very high)**		
			Positive		
		P	1. The **soup** has a very high score for spiciness which may **appeal/be good** for/to the **elderly as** they may enjoy highly flavoured foods.		
			Negative		
		N	1. The **soup** has a very high score for spiciness (indicating strong flavours) this may be **bad**/ unsuitable for the **elderly as** it may cause upset stomachs if they are not used to highly flavoured foods.		
		N	2. The **soup** has a very high score for spiciness which may be bad for the elderly person as they may not like spicy foods.		
2	**c**		3 x 1 mark for **each** correct explanation of the role of the EHD linked to food safety. (Accept answers where candidate uses Environmental Health Officer (EHO))	**3KU**	
			1. **Environmental Health Departments** (EHD) enforces the Food Safety Act (1990)/instigate legal proceedings by making reports to the Procurator Fiscal so ensure **food safety.**		
			2. **Environmental Health Departments** (EHD) will regularly inspect food manufacturers/retailers/ catering outlets without warning to ensure food produced is **safe to eat**.		
			3. **Environmental Health Departments** (EHD) can enter food premises without warning/carry out food safety duties to ensure **food** is **free from harmful bacteria/contaminants/ ensuring food safety.**		
			4. **Environmental Health Departments** (EHD) can take samples of food for testing **so** ensuring **food safety**.		
			5. **Environmental Health Departments** (EHD) can detain/seize food to test for contamination **so** ensuring **food safety**.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**c**		**(cont)** 6. **Environmental Health Departments** (EHD) can issue improvement notices/ hygiene improvement notices to food businesses which will state the offence/ improvement needed to ensure the food is safe to eat ensuring **food safety.** 7. **Environmental Health Departments** (EHD) will provide inspection reports after each visit which will improve **food safety** as food premises will be assured they are meeting/know how to improve any issues related to **food safety**. 8. **Environmental Health Departments** (EHD) can serve emergency prohibition notices/ voluntary closure agreements which will immediately close a food premises/ban the use of a particular piece of equipment/process which may make the food unsafe/cause an imminent risk to health therefore ensuring **food safety.** 9. **Environmental Health Departments** (EHD) work closely with local communities/schools to provide education/heighten awareness/provide guidance/advice of food safety which will ensure **food safety.** 10. **Environmental Health Departments** (EHD) will investigate food poisoning/complaints made by the public and act upon any offences food manufacturers/ retailers/catering outlets may have made so ensuring **food safety.** 11. **Environmental Health Departments** (EHD) will inspect 'high risk' food premises (such as butchers' shops) more frequently to reduce the risk of food poisoning/ improve **food safety**.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**d**		1 mark for each point of evaluation of **cook chill** linked to the consumer. 1 mark for each point of evaluation of **ultra heat treated (UHT)** linked to the consumer. Minimum of 1 mark for each area **Fact** **about the technological development** **Opinion** **positive/negative** **Consequence** **of the fact for the consumer**	**4EV**	
		i	**Cook chill** **Positive**		
		P	1. A large number of **cook chill** products are available to the **consumer** which is good **as** it will increase consumer choice of food.		
		P	2. (As manufacturers are responding to our need to follow a healthy diet) many **cook chill** products now contain less fat/sugar/salt/more fruit and vegetables/NSP which is good **as** it will help **consumers** to follow a healthy diet.		
		P	3. There are now a wide variety of vegetarian **cook chill** products available which benefits the **consumer as** it increases their choice of food.		
		P	4. **Cook chill** products are usually easy to prepare/take minimum preparation time which is good as **consumers** with a busy lifestyle/work may be encouraged to purchase them **as** they will save them time.		
		P	5. Many **cook chill** products can be microwavable this is good as it may appeal to **consumers** who have a busy lifestyle/work long hours **as** they will take less time to cook.		
		P	6. Some **cook chill** products are microwavable and therefore require less energy to cook so may appeal to **consumers as** it will reduce fuel costs and save them money.		
		P	7. Many **cook chill** products can be cooked in their original packaging which may save washing up and equipment needed so appeal to the **consumer** as it will save them time.		
		P	8. **Cook chill** products use high quality ingredients food produced by this process must be in optimum condition this is good for the **consumer** as buying a high quality end product.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**d**	**i**	**(cont)**		
		P	9. **Cook chill** products use high quality ingredients which is good as there is less need to use additives **therefore** the **consumer** may think they are getting a healthier product/**so** the **consumer** is less likely to suffer from allergic reactions.		
		P	10. Many **cook chill** products are produced as single portions which is good for **consumers** who live on their own **as** it may be more cost effective than producing the meals from scratch.		
		P	11. Most **cook chill** products can be frozen on the day of purchase which will benefit the **consumer as** it will save them time with repeated trips to the shops.		
		P	12. **Cook chill** products are cooked quickly and then chilled to just above freezing so will benefit the **consumer as** there will be less loss of nutrients/they will have a longer shelf life.		
		P	13. **Cook chill** products can have a longer shelf life which will benefit the **consumer as** there is less need to shop so frequently.		
		P	14. **Cook chilling** does not affect the food quality/ colour/flavour/texture/nutritional value which is good as this may make the foods more appealing to **consumers**.		
		P	15. **Cook chill** products are produced in strict hygienic conditions which will benefit the **consumer as** it will reduce their risk of food poisoning.		
		P	16. It is not as expensive to produce **cook chilled** products as it is to produce frozen foods so will be good for the **consumer** as it may save them money.		
			Negative		
		N	1. Many **cook chill** products do not meet current dietary advice/are high in fat/ sugar/salt/low in NSP **so** may be unsuitable for **consumers** concerned about following a healthy diet.		
		N	2. **Cook chill** products only require to be reheated, however if food is not cooked for the correct length of time this may be bad for the **consumer as** it could lead to food poisoning.		
		N	3. If cooking instructions for **cook chill** products are not followed carefully this could lead to the food being overcooked which could be bad for the **consumer as** their meal may be inedible.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	d	i	**(cont)** **Negative**		
		N	4. **Cook chill** products have a shorter life than frozen foods (so would be unsuitable for bulk buying), this could be a problem for **consumers** who lead a busy lifestyle/work schedule **as** it may mean more frequent trips to the shops/not suitable for bulk buying.		
		N	5. **Cook chill** products must be refrigerated (to prevent bacterial growth) this may cause **consumers** a problem **as** they may not have access to a fridge so could lead to food poisoning.		
		N	6. **Cook chilled** products require a lot of packaging which may not be good for some **consumers** (who may find this unacceptable) **as** they are concerned about the impact on the environment.		
		N	7. If **consumers** are preparing **cook chilled** products for a family/large group it will be more expensive than cooking from raw ingredients **so** may make it unsuitable for people who have a limited budget.		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	d	ii	**Ultra Heat Treated (UHT)** **Positive** **P** 1. **Ultra heat treated** foods have a long shelf life so can benefit the **consumer as** it saves them time on repeated journeys to the shops. **P** 2. **Ultra heat treated** foods are often cheaper than fresh foods **so** will benefit **consumers** on a budget/low income groups/save **consumers** money. **P** 3. As **ultra heat treated** foods can be stored at room temperature until opened/do not need specialist storage, this can benefit the **consumer as** it will save them space in the fridge/freezer until needed/more convenient. **P** 4. **Ultra heat treated** products are sterile/ contain no bacteria this is good as it makes food safer to eat for the **consumer.** **P** 5. **Ultra heat treated** foods can be purchased in bulk so can benefit the **consumer as** it saves repeated trips to the shops/may be useful in bad weather/ emergencies. **P** 6. **Ultra heat treatment** kills bacteria so can benefit the **consumer as** it makes the food safer/less likely to cause food poisoning. **P** 7. **Ultra heat treated** products include individual milk cartons which can be used in hotel rooms without specialist storage so benefiting the **consumer as** it provides a convenient product. **Negative** **N** 1. **Ultra heat treated** products are limited as the process is only suitable for a small number of products this is bad for **consumers as** it reduces the range available to them. **N** 2. The high temperatures used in producing **ultra heat treated** products can lead to changes in the natural flavour of food this may be bad for the **consumers** as they may find the taste unacceptable. **N** 3. Once **ultra heat treated** food is opened it must be stored/used as a fresh product this may be bad for some **consumers** who only need a small quantity **as** this could result in waste. **N** 4. Due to the high temperatures used in **ultra heat treated** products some vitamins are destroyed which is bad **as** the full nutritional benefit of the product will not be passed to the **consumer.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
2	**e**		2 x 1 mark for **each** explanation of European food labelling directives linked to benefits to the **consumer**. 1. All food must be clearly marked with its name/ description so the **consumer** knows exactly what they are buying. 2. Most pre-packaged foods must show a list of ingredients in descending order of weight so the **consumer** can check for any foods they wish/ need to avoid. 3. All additives (except flavourings) must be listed and identified by their E number and additive type in the ingredients list so the **consumer** can avoid any which they are sensitive to. 4. The EU place restrictions on which additives are allowed to be used so the **consumer** can be assured they are safe to eat. 5. Food packages must be sold in metric weights so the **consumer** can compare food products easier to get the best value for their money. 6. Pre-packaged foods must carry a date of durability eg “best before” so the **consumer** will know when the food is of the best quality to eat. 7. Highly perishable foods must carry a “use by” date so the **consumer** will know when the food is safe to eat/reducing the risk of food poisoning. 8. Nutritional labelling (which is optional) must follow a standard format so the **consumer** finds it easier to compare like for like products. 9. Food manufacturers must list (12) potentially allergic ingredients (eg nuts/gluten) so the **consumer** can avoid any foods which may cause them harm. 10. Sets out details with regard to products which have a low energy/reduced energy claim so the **consumer** will know the claims being made are factual. 11. Pre-packed foods should have the ‘e’ mark to indicate the average weight system so the **consumer** knows they are getting the correct weight.	**2KU**	

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**a**		3 x 1 for identification of **each** reason for **increase in food poisoning** 3 x 1 mark for **each** explanation linked to the reason for increase in food poisoning. Reason must be identified before mark can be awarded. If reason is identified within the explanation for increase in food poisoning mark can be awarded.	**6KU**	
		1	**Reason − Intensive farming** **Explanation** 1. More intensive methods of food production/large numbers of animals farmed (in a small space) increase the risk of contamination/animals may have large numbers of bacteria which may lead to **food poisoning**.		
		2	**Reason – Food Production** **Explanation** 1. Increased length of the food production chain/importing food from abroad may allow bacteria to form/contaminate food as more people/processes are involved in treating/ transporting/storing food which may increases **food poisoning**.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**a**		**(cont)**		
		3	**Reason – Eating outside the home/ barbeque** **Explanation** 1. There is an increased risk of infected food handlers/food handlers with poor hygiene habits preparing food which may contaminate food (with bacteria) and so increasing the risk of **food poisoning.** 2. Potentially there are more people handling the food which increases the opportunity for contamination increasing the incidence of **food poisoning.** 3. Less food is prepared/cooked in the home which means more people are handling the food so increasing the risk of **food poisoning**. 4. Packed food lunches which are not chilled may give bacteria time to multiply and so increase the risk of **food poisoning.** 5. Inadequate hand washing prior to consuming food at school/place of work can allow food to be contaminated and so increase the risk of **food poisoning**. 6. There is an increased risk that food may not be cooked adequately which could increase the risk of **food poisoning**. 7. Increase in barbequing food can mean that high-risk foods do not reach the core temperature (75º) in the centre/bacteria are not killed which increases the incidence of **food poisoning**.		
		4	**Reason – Shopping for food** **Explanation** 1. If chilled/frozen food is not stored/ transported home in a cool box/chilled conditions bacteria may multiply and so increase the risk of **food poisoning.** 2. If the use by date is short when purchasing perishable foods a high number of bacteria may be allowed to develop which may increase the risk of **food poisoning.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	a		**(cont)**		
		5	**Reason – Range of food retail outlets** **Explanation** 1. Food at outdoor markets/stalls which is not covered could become contaminated with bacteria which may increase the risk of **food poisoning.** 2. People buy ready to eat food from supermarkets/ takeaways/restaurants this may involve more people in the food chain so opportunity for contamination can increase resulting in a higher risk of **food poisoning**. 3. An increase in food retail outlets results in more outlets for EHO to check which may increase the risk of **food poisoning**.		
		6	**Reason – Food preparation within the home** **Explanation** 1. Inadequate cooking/microwave/reheating of food means that bacteria are not killed increasing the incidence of **food poisoning.** 2. Inadequate cooling of food so bacteria have more time to multiply which may increase the risk of **food poisoning.** 3. Poor literacy/numeracy skills may mean that the person preparing the food cannot follow the cooking instructions given on packets/in recipe books and so under cook the food which may increase the risk of **food poisoning.** 4. Inadequate thawing of poultry means food may not be thoroughly cooked so bacteria are not killed and so increase the risk of **food poisoning.** 5. Infected food handlers/those with poor hygiene habits increase the incidence of **food poisoning** by transferring bacteria to food. 6. Uncovered food could be contaminated by animals/flies and if this is then consumed it may lead to **food poisoning.** 7. Students/people (setting up home for the first time) may have no knowledge about how to handle/store/prepare food and so bacteria have the opportunity to multiply increasing the risk of **food poisoning.** 8. Inadequate hand washing prior to consuming/ preparing food at home can allow food to be contaminated and so increase the risk of **food poisoning.** 9. Inadequate hand washing after handling pets/ playing outside and then preparing/ consuming food at home can allow food to be contaminated and so increase the risk of **food poisoning.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**a**		**(cont)**		
		7	**Reason – Lack of knowledge** **Explanation** 1. Unsure of appropriate reheating temperatures to ensure that all bacteria are destroyed may lead to an increase in the number of cases of **food poisoning.** 2. Leading to incorrect storage in fridge/ possible cross contamination between raw and cooked food increasing risk of **food poisoning.** 3. Leading to cross contamination of raw food to cooked food may mean that bacteria are present on the cooked food which can lead to **food poisoning.** 4. Damaged utensils/cracks in crockery can harbour bacteria which when used to prepare food could lead to **food poisoning.**		
		8	**Reason – Advanced preparation** **Explanation** 1. Meals which are served for celebrations/ anniversaries can be a risk as preparation is sometimes carried out too far in advance/the food may be stored in the danger zone (5º - 63ºC)/allowing bacteria to multiply to high levels so increase the incidence of **food poisoning.**		
		9	**Reason – Standard of living/Money available** **Explanation** 1. Purchase of meat/dairy products increases; these foods are the main carriers of **food poisoning** bacteria. 2. Potentially increase in purchase of take away meals/eating in restaurants so if food safety/ food hygiene guidelines are not followed this may increase the risk of **food poisoning.** 3. Food is kept for longer if money is limited giving an opportunity for bacteria to breed and so increase the risk of **food poisoning.** 4. When consumers travel abroad on holiday they may be exposed to poor hygienic practices/ bacteria and suffer from **food poisoning.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**a**		**(cont)**		
		10	**Reason – Increased public awareness** **Explanation** 1. People are more aware of the symptoms of food poisoning/seek medical assistance/report more cases so it appears as if the number of cases of **food poisoning** has increased.		
3	**b**		4 x 1mark for **each** point of evaluation linked to the nutritional needs of a **vegetarian**. **Fact** **nutrient identified or function of nutrient** **Opinion** **positive/negative** **Consequence** **of the nutrient function/ benefit to health for the vegetarian**	**4EV**	
		1	**Broccoli soup** **Positive** **P** 1. Folic acid within the broccoli soup is beneficial to a **vegetarian as** it is required for the formation of red blood cells/this could help prevent anaemia **P** 2. Broccoli soup will contain vitamin C which may be good for the **vegetarian as** it may help them to absorb the maximum amount of iron from food/ preventing anaemia. **P** 3. Broccoli soup will contain iron which will be beneficial to a **vegetarian** (**as** their intake may be low from not eating red meat) **so** ensuring they don't suffer from anaemia. **P** 4. Vitamin A contained in the broccoli soup may be good for the **vegetarian as** it is important for eyesight. **P** 5. Vitamin B2 contained in the broccoli soup may be good for the **vegetarian as** it helps release energy from protein/ carbohydrates/fats. **P** 6. Antioxidant vitamins/ACE contained in the broccoli soup may be good for the **vegetarian as** they will help maintain immune system/reduce the risk of CHD/cancer. **P** 7. NSP found in the broccoli soup will be beneficial to the **vegetarian as** it will help remove waste from the body so preventing constipation.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	b		**(cont)**		
		P	8. NSP found in the broccoli soup will be beneficial to the **vegetarian as** it can provide a feeling of fullness so preventing snacking on high fat/ sugary foods/preventing weight gain.		
		P	9. The broccoli soup may contain calcium which will be beneficial to a **vegetarian** (**as** their intake may be low if they are a vegan/do not consume dairy products) **so** they don't suffer from osteoporosis/osteomalacia/rickets.		
		P	10. The broccoli soup may be low in fat/ saturated fat which will be beneficial to a **vegetarian** (**as** there is no increase in cholesterol) **so** this may prevent narrowing of the arteries/preventing coronary heart disease in later life /preventing obesity.		
			Negative		
		N	1. The NSP/dietary fibre found in broccoli soup may not be beneficial to a **vegetarian** as the NSP/dietary fibre may bind with iron limiting the absorption/ making it unavailable so possibly contributing to anaemia.		
		N	2. The broccoli soup contains calcium and NSP/dietary fibre which may be a disadvantage to the **vegetarian** as the NSP/dietary fibre may bind with the calcium therefore making it unavailable so possibly contributing to rickets/ osteoporosis/osteomalacia.		
		N	3. The broccoli soup may be seasoned with salt which may be bad for the **vegetarian** as this may contribute to high blood pressure/coronary heart disease in later life.		
		N	4. The broccoli soup may have been cooked at a high temperature for a long time this is not good as Vitamin C is destroyed at fairly low temperatures therefore would not be available to the **vegetarian** to aid the absorption of iron.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	b		**(cont)**		
		2	**Lentil Curry**		
			Positive		
		P	1. Lentils are a good source of protein which will be beneficial to a **vegetarian as** it may supply an alternative protein source/non meat.		
		P	2. Lentils will contain protein which is good for the **vegetarian as** this will allow them to grow/repair damaged tissue.		
		P	3. Lentil curry will contain iron which will be beneficial to a **vegetarian (as** their intake may be low from not eating red meat) **so** ensuring they don't suffer from anaemia.		
		P	4. Folic acid within the lentils is beneficial to a **vegetarian as** it is required for the formation of red blood cells, (iron levels may be low) **so** this could help prevent anaemia.		
		P	5. Vitamin B contained in the Lentil curry may be good for the **vegetarian as** it helps release energy from protein/ carbohydrates/fats.		
		P	6. The lentil curry may contain calcium which will be beneficial to a **vegetarian (as** their intake may be low if they are a vegan/do not consume dairy products) **so** they don't suffer from osteoporosis/osteomalacia/rickets.		
		P	7. Phosphorus found in the lentil curry will be beneficial to a **vegetarian (as** their intake may be low if they are a vegan/do not consume dairy products) **so** this could help in the formation/ development/ maintenance of bones/teeth.		
		P	8. Phosphorus found in the lentil curry will be beneficial to a **vegetarian (as** their intake may be low if they are a vegan/do not consume dairy products) **so** this could help with the production/ release of energy from cells.		
		P	9. NSP found in the lentil curry will be beneficial to the **vegetarian as** it will help remove waste from the body so preventing constipation.		
		P	10. The Lentil curry may be low in fat/ saturated fat which will be beneficial to a **vegetarian (as** there is no increase in cholesterol)l **so** this may prevent narrowing of the arteries/preventing coronary heart disease in later life/preventing obesity.		
		P	11. The curry seasoning in the lentil curry may mean it is low in salt which is beneficial to a **vegetarian as** there will be a reduce risk of hypertension/high blood pressure.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	b		**(cont)**		
			Negative		
		N	1. The NSP/dietary fibre found in the Lentil curry may not be beneficial to a **vegetarian as** the NSP/dietary fibre may bind with iron limiting the absorption/ making it unavailable so possibly contributing to anaemia.		
		N	2. The Lentil curry contain calcium and NSP/ dietary fibre which may be a disadvantage to the **vegetarian as** the NSP/dietary fibre may bind with the calcium therefore making it unavailable and so possibly contributing to rickets/ osteoporosis/osteomalacia.		
		N	3. The Lentil curry may be seasoned with salt which may be bad for the **vegetarian as** this may contribute to high blood pressure/coronary heart disease in later life.		
		3	**Lemon Cheesecake**		
			Positive		
		P	1. The lemon cheesecake will provide carbohydrate which will be good for a **vegetarian** as it will provide them with energy to carry out daily activities.		
		P	2. The lemon cheese cake will give the **vegetarian** a source of high biological value protein which is good (**as** the **vegetarian** may be lacking protein) so allowing them to grow/repair correctly.		
		P	3. The lemon cheesecake will contain calcium which will be beneficial to a **vegetarian so** ensuring they don't suffer from osteoporosis/ osteomalacia/rickets.		
		P	4. Phosphorus found in the lemon cheesecake will be beneficial to a **vegetarian** as this could help in the formation/development/maintenance of bones/teeth.		
		P	5. Phosphorus found in the lemon cheesecake will be beneficial to a **vegetarian as** this could help with the production/release of energy from cells.		
		P	6. Vitamin B12 contained in the lemon cheesecake will be beneficial to a vegetarian (as it may be lacking in the diet from not eating meat) **therefore** helping to prevent anaemia.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	b		**(cont)**		
		P	7. Vitamin A contained in the lemon cheesecake may be good for the **vegetarian as** it is important for eyesight/antioxidant.		
		P	8. Vitamin D contained in the lemon cheesecake is beneficial to the **vegetarian as** it helps absorb calcium so preventing osteoporosis.		
		P	9. Lemon cheesecake will contain vitamin C which may be good for the **vegetarian as** it may help them to absorb the maximum amount of iron from food preventing anaemia.		
		P	10. Antioxidant vitamins/ACE contained in the lemon cheesecake may be good for the **vegetarian as** they will help maintain immune system/reduce the risk of CHD/Cancer.		
		P	11. The lemon cheesecake will contain fat which is beneficial to the **vegetarian as** it will provide a source of fat soluble vitamins A D E K.		
			Negative		
		N	1. The lemon cheesecake may contain saturated fat which may not be good for the **vegetarian as** a high intake of saturated fat may contribute to obesity/ coronary heart disease.		
		N	2. One of the main ingredients in the lemon cheesecake is cheese which may not be suitable for all **vegetarians as** if they are vegan they will not eat products of animals/so will lack protein.		
		N	3. The lemon cheesecake may be high in energy which may be bad for the **vegetarian** particularly if not active **as** this could lead to weight gain.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**c**		4 x 1 mark for **each** explanation of the benefit of food additives linked to the consumer. Minimum of 1 mark should come from each area.	**4KU**	
		i	**Colourings** 1. During processing of food the natural colour is often lost so the use of food colouring helps to improve the appearance/making it more attractive to the **consumer.** 2. Food colourings can enhance the colour of certain foods making them more attractive to the **consumer**. 3. Food colourings can be used to ensure colour is maintained during storage of products so that **consumer** gets the expected colour. 4. The **consumer** often prefers uniformity of colour in products so food colourings are sometimes added to mask variations in colour in a product. 5. **Consumers** can have increase choice as food colourings can be added to give a novelty product eg green tomato sauce. 6. Some manufacturers have removed artificial colourings from children's products so that **consumers** can buy safe in the knowledge that children won't have allergic reaction/become hyperactive.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**c**		**(cont)**		
		ii	**Preservatives** 1. The addition of preservatives benefits the **consumer** by helping to keep food safer longer protecting it from micro-organisms. 2. The **consumer** is less likely to waste food as preservatives can lengthen the shelf life of food products/allowing for longer storage. 3. The use of preservatives allows for a greater variety of food products giving the **consumer** more choice. 4. The use of preservatives allows for a greater variety of ready prepared/ convenience products this is a benefit as time will be saved preparing foods by the busy **consumer.** 5. Preservatives enable manufacturers to transport food in bulk this is cheaper and so helps to keep the cost of food products down for the **consumer.** 6. Preservatives allow for food to be bought/stored for longer periods of time this means the **consumer** will save time/money. 7. Preservatives can be added to some fruits to prevent browning making them more appealing to the **consumer.** 8. Sodium nitrite prevents bacterial growth (Clostridium botulinum) in cured/ processed meat products ensuring the food is safe for the **consumer**. 9. Sugar/salt/vinegar are natural preservatives which can provide a variety of food products giving the **consumer** more choice.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**d**		4 x 1 mark for **each** point of evaluation linked to each factor influencing **food choice.** **Fact** **how the factor influences food choice** **Opinion** **positive/negative** **Consequence** **of the fact for the consumer**	**4EV**	
		i	**Cooking skills**		
			Positive		
		P	1. Some consumers have good **cooking skills** and are more likely to purchase individual ingredients/cook homemade dishes this is good **as** it gives them more variety in the diet/a healthier diet.		
		P	2. Consumers with good **cooking skills** may choose to buy individual ingredients and prepare/cook them this is good **because** it can save them money/cook in bulk and freeze.		
		P	3. Consumers with good **cooking skills** may want to make homemade foods as they know how to prepare all the individual ingredients this is good **as** they will not choose convenience/unhealthy/ expensive foods.		
		P	4. A lack of consumer **cooking skills** has resulted in an increased range of exotic/luxury type foods this is good **as** the consumer has a greater variety to choose from.		
			Negative		
		N	1. Consumers with limited **cooking skills** may eat more ready meals/take away meals this is bad **as** these may be high in fat/sugar/salt low in NSP.		
		N	2. Busy consumers may have less time to cook/prepare foods so they may purchase ready meals this is bad **as** it means that traditional **cooking skills** may be lost.		
		N	3. **Cooking skills** involved in making home prepared food take time to carry out this is bad **as** it may conflict with leisure/work interests making consumers more likely to choose convenience foods.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	d	ii	**Foreign Travel** **Positive** **P** 1. More consumers **travel abroad** on holiday/ business where they may try different foods which is good **as** it may increase food choice/ add variety when they go home. **P** 2. As a result of consumers **travelling abroad** they are more likely to choose foreign foods/ ingredients when they come home which is good **because** they can continue to enjoy these foods at home. **P** 3. Consumption of pasta/rice/noodles dishes has increased as a result of **foreign travel** which is good **because** it can help consumers who are concerned about meeting dietary targets. **P** 4. When **travelling abroad** many holidays now offer consumers the opportunity to learn how to cook traditional meals which is good **because** it can provide knowledge of foreign ingredients (which consumers may choose to buy). **Negative** **N** 1. More consumers **travel abroad** on holiday/ business where they are exposed to a variety of new tastes this can be bad **as** it may encourage the consumption of unhealthy take away foods/ ready meals. **N** 2. It is illegal to bring foods from **foreign countries** into the United Kingdom so new foods that have been enjoyed through foreign travel may be difficult to source which is bad **as** consumers may not be able to reproduce similar dishes at home restricting food choice. **N** 3. When travelling to **foreign countries** choice may be limited due to religion/ religious festivals which could be bad **as** it may restrict consumer choice of food. **N** 4. 'All-inclusive' meal options taken when **travelling abroad** may repeat menu options several times during consumers stay which is bad **as** it may restrict consumer choice of food.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	d	iii	**Environmental issues** **Positive** **P** 1. Consumers are more aware of the possible effect of **chemicals** in food this is good **as** there has been an increase in natural/organic/ unprocessed foods so giving greater food choice. **P** 2. There has been an increase awareness of **animal** related illness this is beneficial **as** it has led to consumers opting for vegetarian foods. **P** 3. Consumers have become more conscious of **saving energy** increasingly using microwave ovens this is beneficial **as** it has given greater choice of microwave foods/meals. **P** 4. Consumers have become more aware of the effects of packaging on the **environment** this is good **as** they may only choose foods which use less packaging/biodegradable material/ recyclable/refillable containers. **P** 5. Consumers have concern about how animals **are bred/treated** this is good **as** they may make food choices where animal care has been considered choosing cruelty free/free range/ dolphin friendly/farm assured. **P** 6. Consumers are more aware of the distance that food has been transported/ **food miles** so they may choose food from local/Scottish sources this is good as it will help to reduce (global) pollution/ energy/climate change. **P** 7. Consumers are more aware of the distance that food has been transported/ **food miles** this so they may choose only foods that are in season this is good **as** it will help to reduce (global) pollution/ energy/climate change. **P** 8. Consumers may wish to reduce their **carbon foot print** through buying/cooking the right amount of food this is good **as** will help to minimise food waste. **P** 9. Consumers are more aware of **sustainable food**/the process of food from field to plate this is good **as** they will choose local foods minimising energy used in transport/storage/ helping to contribute to local economy. **P** 10. Consumers are more aware of the process of food from field to plate and may choose **fair trade foods** this is good **as** buying foreign foods out of season will help sustain producers in poorer countries.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	d	iii	**(cont)**		
			Negative		
		N	1. Consumers are more aware of the possible effect of **chemicals in food** as there has been an increase in natural/ organic/unprocessed this is bad **as** it may make food choice more expensive.		
		N	2. Consumers have become more conscious of **saving energy** increasingly using microwave ovens this is not good **as** it may encourage choice of unhealthy microwave foods/meals.		
		N	3. Consumers are more aware of the distance that food has been transported/ **food miles** this is bad **as** they may not choose fair trade foods so disadvantaging producers/economy in poorer countries.		
		iv	**Money Off Coupons**		
			Positive		
		P	1. **Money-off coupons** might be found on packaging/magazines/newspaper/ internet encouraging consumers to purchase these foods this is good **as** it will save them money/ encourage choice of new foods		
		P	2. **Money-off coupons** might be found on packaging/magazines/newspaper internet for healthy foods encouraging consumers to purchase these foods which is good **as** it may help prevent diet related diseases.		
		P	3. On pack **money off coupons** may be on an initial food pack encouraging consumer to make a repeat purchase of food, this is good **as** it will save them money buying a food they know they like.		
			Negative		
		N	1. When **money-off coupons** end the consumer may be unwilling/unable to purchase food at normal/increased price this is bad **as** limits their food choice.		
		N	2. The consumer may feel embarrassment at using the **money off coupon** and opt not to choose the food product this is bad **as** they will not save any money.		
		N	3. Consumers may choose food they have a **money off coupon** for however the coupon may have a limited life span this is bad **as** they will not make the saving they thought.		

Question			Expected Answer/s	Max Mark	Additional Guidance
3	**e**		2 x 1 mark for each explanation of the effect on **gelatinisation**	**2KU**	
		i	**Starch** 1. High proportion of starch to liquid in the mixture will affect **gelatinisation** as the mixture will be thicker. 2. The type of starch used affects **gelatinisation** as arrowroot gives a clear and transparent gel/flour gives a cloudy/creamy appearance/ flavour in food products. 3. A larger starch granule will **gelatinise** a food product much quicker than a smaller granule.		
		ii	**Acids** 1. Acids such as lemon juice/tomato/vinegar cooked together with a starch and a liquid reduces the degree of **gelatinisation**/this could result in a runny sauce in a food product. 2. Acid ingredient lemon juice/tomato/vinegar should be added after **gelatinisation** to prevent sauce becoming too runny/thickness of sauce being reduced.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**a**		5 x 1 mark for each point which evaluates school meals to a **different** dietary target **Fact** **factor relating to the contribution of school meals** **Opinion** **positive/negative** **Consequence** **how it links to dietary target** **Fruit and vegetables** **Average intake to double to 400g per day** **Positive**	**5EV**	
		P	1. Fresh fruit is available at all till points so can be purchased with all **school meals** which is good **as** it will help contribute to meeting the dietary target of **average intake of fruit and vegetables to double to 400g per day**.		
		P	2. Prepared fruit salads are available as a dessert in **school meals** which benefits children **as** it will help them to achieve the target of **average intake of fruit and vegetables to double to 400g per day**.		
		P	3. Fruit smoothies can be purchased to consume with **school meals** which is good **as** these will help contribute to meeting the target of **average intake of fruit and vegetables to double to 400g per day**.		
		P	4. **School meals** offer a selection of fresh fruit juices (minimum of 50% fruit juice) which is good **as** this will help contribute to the target of **average intake of fruit and vegetables to double to 400g per day**.		
		P	5. A selection of vegetables are available to accompany **school meals** which is good **because** it helps contribute to meeting the target of **average intake of fruit and vegetables to double to 400g per day**.		
		P	6. Many of the sandwiches sold for **school meals** contain salad which is good **as** it will help achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		
		P	7. Fresh soups containing different vegetables are sold daily as part of the **school meals** which is good because this will help achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		
		P	8. School meals provide a variety of main meals which contain vegetables which is good **because** this will help achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Negative**		
		N	1. Children may not choose to eat vegetables with their **school meal** which is not good **as** they will not achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		
		N	2. Children may choose not to purchase fruit with their **school meal** which is bad **as** they will not achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		
		N	3. Fruit available with **school meals** may not be fresh so may not look appealing which is bad **because** children will not purchase it so will not meet the target of **average intake of fruit and vegetables to double to 400g per day.**		
		N	4. Vegetables which are to be sold with **school meals** may have dried out so will not look appealing to children this is bad **as** they will not achieve the target of **average intake of fruit and vegetables to double to 400g per day.**		
		N	5. Vegetables sold as part of **school meals** may be overcooked which is not good because children will not buy them **so** not contributing to the target **average intake of fruit and vegetables to double to 400g per day.**		
			Bread **Intake to increase by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads)** **Positive**		
		P	1. **School meals** offer a variety of breads/ rolls/ wraps every day which is good **because** the variety will help children **increase their bread consumption by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads).**		
		P	2. **School meals** offer fresh bread with soup which is good **as** it will help children to **increase their bread consumption by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads).**		
		P	3. **School meals** offer special promotions such as sandwich meal deals which is good **as** it will help children **increase their bread consumption by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads).**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Negative**		
		N	1. Bread served with soups may be uncovered for a the lunch period so those getting **school meals** last may find it stale/hard which is not good as children may not eat the bread **so** not achieving the target to **increase their bread consumption by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads).**		
		N	2. Choice of breads may be limited towards the end of **school meals** which could put some children off which is bad **as** they will not then **increase their bread consumption by 45% from present daily intake to 106g (mainly by using wholemeal and brown breads).**		
			Breakfast cereals **Average intake to double from current intake of 17g per day/increases to 34g.** **Positive**		
		P	1. **School meals** have included breakfast cereals into their home baking which is good **as** this will help increase their intake contributing to **doubling their current intake of 17g per day.**		
		P	2. **School meals** offer breakfast clubs selling a variety of cereals which is good **because** it will help children **double their current intake of 17g per day.**		
			Negative		
		N	1. **School meals** may not serve branded breakfast cereal so putting some children off. This is bad **as** it will not help to **double current breakfast cereal intake of 17g per day**.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Fat** **Average intake of total fat to reduce (from 40.7%) to no more than 35% of food energy.** **Average intake of saturated fatty acids to reduce (from 16.6%) to no more than 11% of food energy.** **Positive**		
		P	1. **School meals** only offer savoury crackers/ oatcakes/breadsticks as savoury snacks which is good **because** it will help achieve the target to **reduce average intake of total fat from 40·7% to no more than 35% of food energy/ reduce average intake of saturated fatty acids from 16·6% to no more than 11% of food energy.**		
		P	2. **School meals** do not serve butter/ spreads with bread/sandwiches which is good **because** it will help **reduce average intake of total fat from 40·7% to no more than 35% of food energy.**		
		P	3. **School meals** can only serve chips as an accompaniment to meals which is good **because** it will help **reduce average intake of total fat from 40.7% to no more than 35% of food energy.**		
		P	4. Main meals served for **school meals** often contain poultry/fish rather than red meat reducing total fat intake which is good **because** it will help **reduce average intake of total fat from 40.7% to no more than 35% of food energy/ reduce average intake of saturated fatty acids from 16.6% to no more than 11% of food energy.**		
		P	5. Many fatty foods such as burgers/pizza served for **school meals** are now grilled/ baked which is good **as** it will help **reduce average intake of total fat from 40.7% to no more than 35% of food energy/reduce average intake of saturated fatty acids from 16.6% to no more than 11 % of food energy.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**a**		**(cont)**		
		P	6. **School meals** only serve semi skimmed milk (milk with less than 1.8g per 100ml) which is good **because** it will help **reduce average intake of saturated fatty acids from 16.6%to no more than 11% of food energy.**		
		P	7. **School meals** cannot provide food that has been deep fried either in the cooking/ manufacturing process more than 3 times per week which is good **because** it will help **reduce average intake of total fat from 40.7% to no more than 35% of food energy/reduce average intake of saturated fatty acids from 16.6% to no more than 11% of food energy.**		
			Negative		
		N	1. **School meals** still offer burgers/pies which can be high in saturated fats this is bad **because** it will not help **reduce average intake of saturated fatty acids from 16.6% to no more than 11% of food energy.**		
		N	2. Crisps sold in the **school meals** are not limited so children may eat too many packets which is bad **because** it will not help **reduce average intake of saturated fatty acids from 16.6% to no more than 11% of food energy.**		
		N	3. Breakfast clubs run by **school meals** offer bacon/sausage rolls which is bad **because** it will increase total fat so not **reducing average intake of total fat from 40.7% to no more than 35% of food energy/reduce average intake of saturated fatty acids from 16.6% to no more than 11% of food energy.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Salt** **Average sodium intake to reduce from 163mmol to 100mmol per day/6g per day.** **Positive**		
		P	1. **School meals** cannot sell food/drink with added salt which is good **because** it will help **reduce the average intake of salt from 163mmol to 100mmol per day.**		
		P	2. **School meals** cannot offer any salt to pupils, which is good **because** (they may have enough from processed foods) so this will help **reduce the average intake of salt from 163mmol to 100mmol per day.**		
		P	3. **School meals** flavour foods using herbs and spices, which is good **as** it will help **reduce the average intake of salt from 163mmol to 100mmol per day.**		
			Negative		
		N	1. **School meals** still offer processed burgers/ chicken burgers which can be high in salt this is bad **as** it will not help **reduce the average intake of salt from 163mmol to 100mmol per day.**		
			Sugar **Average intake of NME sugars in adults not to increase** **Average intake of NME sugars in children to reduce by half to less than 10% of total energy.**		
			Positive		
		P	1. **School meals** no longer sell sweets/ confectionary which is good **as** this will help children to **reduce their sugar intake by half to less than 10% of energy intake**.		
		P	2. **School meals** do not sell any fizzy drinks, which is good **because** this will help children to **reduce their sugar intake by half to less than 10% of energy intake**.		
			Negative		
		N	1. **School meals** sell a selection of home baking/muffins this is bad **as** these can be high in sugar so will not help **reduce children's sugar intake by half to less than 10% of energy intake.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Total complex carbohydrates** **(Increase non sugar carbohydrates) intake by 25% (from 124g per day).** **Consumption of fruit and vegetables, bread, breakfast cereals, rice pasta and an increase in potato consumption.** **Positive**		
		P	1. **School meals** offer pasta/potatoes/rice with every main meal which is good **as** it will help **increase non sugar carbohydrates intake by 25% from 124g per day.**		
			Negative		
		N	1. Pupils may not like the sauce/dish **school meals** are serving with the pasta/potatoes/rice which is bad **because** this may stop them trying the dish so will not help contribute to meeting the target of **increasing non sugar carbohydrates intake by 25% from 124g per day.**		
			(Also see targets for fruit and vegetables/ bread/ breakfast cereals - to award mark answer must relate to the dietary target for total complex carbohydrates)		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	a		**(cont)** **Fish** **White fish consumption to be maintained at current levels** **Oil-rich fish to be doubled from 44g per week to 88g per week** **Positive**		
		P	1. **School meals** offer tuna/salmon as a sandwich fillings/baked potato fillings which is good **as** it will help **increase oily fish consumption from 44g to 88g per week.**		
		P	2. **School meals** must provide oily fish/ tuna/ salmon at least once every three weeks which is good **as** it will help **increase oily fish consumption from 44g to 88g per week.**		
		P	3. **School meals** offer white fish as a main meal option at least once per week which is good **because** it will help **maintain white fish consumption at its current level.**		
			Negative		
		N	1. Pupils may choose other options from **school meals** so not include fish in their weekly diet this is bad **as** it will not contribute to **increase oily fish consumption from 44g to 88g per week maintaining white fish consumption at its current level.**		
		N	2. Although **school meals** offer fish pupils may be put off by the smell/aroma which is bad **as** it will not contribute to **increase oily fish consumption from 44g to 88g per week maintaining white fish consumption at its current level.**		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**b**		**4 x 1 mark for each explanation linked to the consumer.** **Minimum of one mark from each area.**	**4KU**	
		i	**Myco-proteins** 1. **Myco-proteins** are low in fat/Iow in calories **so** they can be used to create healthy options/ weight reduction food products for the **consumer**. 2. **Myco-proteins** can be shaped/chunks/ minced **so** they can be used to create a wide variety of food products for the **consumer**. 3. **Myco-proteins** can be easily/frozen/ chilled **so** are convenient can save time when preparing a variety of foods for the **consumer**. 4. **Myco-proteins** do not need any preparation **so** they will save the **consumer** time. 5. **Myco-proteins** can be used to replace meat (**as** they contain a source of (high biological) protein) so can be used to produce dishes for vegetarians/ increasing the choice of food for the **consumer.** 6. **Myco-proteins** contain vitamin B complex/zinc **so** may be beneficial for **consumers** who are vegetarian as these nutrients are often lacking in their diets. 7. **Myco**-**proteins** do not shrink when cooked **so** there is no waste making them more economical to use for the **consumer.** 8. **Myco-proteins** do not contain any fat/gristle **so** there will be no waste making them more economical to use for the **consumer**. 9. **Myco-proteins** contain NSP/dietary fibre **so** could reduce the risk of bowel disorders/ constipation/snacking for the **consumer**. 10. **Myco-proteins** do not lose any of their nutritional value during cooking/freezing **so** the final food product will have a high nutritional value for the **consumer**. 11. **Myco-proteins** are similar in texture to meat however is lower in fat **so** could be used as a low fat alternative for the **consumer**. 12. **Myco-proteins** absorb flavours from other ingredient **so** will ensure the final food product has a good flavour for the **consumer**. 13. **Myco-proteins** are cheaper than meat so benefit the **consumer as** it will save them money.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	b	ii	**Modified atmosphere packaging (MAP)** 1. **Modified atmosphere packaging** has increased the variety of foods available all year round **so** benefits the **consumer** as it increases their choice of food. 2. **Modified atmosphere packaging** extends the shelf life of fresh foods without the use of preservatives/additives **so** benefits **consumers** who may be concerned about the impact of additives on health. 3. **Modified atmosphere packaging** reduces the oxygen content of the pack/ preventing the growth of some micro-organisms (aerobes) **so** benefits the **consumer** as it reduces the risk of food poisoning. 4. **Modified atmosphere packaging** is only suitable for good quality products **so** will benefit the **consumer** as they know they are getting a high quality product. 5. As the normal atmosphere in **modified atmosphere packaging** is changed the products will keep a better appearance **so** will benefit the **consumer** as it will remain appealing to the consumer reducing waste. 6. **Modified atmosphere packaging** has allowed a wide variety of foods which are good quality/ easy to prepare/preservative free to be produced **so** benefits the **consumer** as it meets their needs of having high quality products that require minimum preparation to fit in with their busy lifestyles. 7. Foods packaged using **modified atmosphere packaging** are packed in easy to store forms **so** benefiting the consumer as it helps them stack foods easily after shopping. 8. The packaging used in **modified atmosphere packaging** allows the consumer to see the food before purchasing it so benefiting the consumer as they will know exactly what they are getting before purchase. 9. As the colour of foods packaged using **modified atmosphere packaging** does not deteriorate (until opened) this will benefit the **consumer as** it ensures they are getting a product in its best condition.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**b**	**ii**	**(cont)** 10. Packaging used in **modified atmosphere packaging** is water resistant improving keeping quality during storage benefiting the **consumer as** they will be getting a high quality product. 11. **MAP** extends shelf life of fresh foods so benefits **consumer as** it allows them to take advantage of special offers/save money.		
4	**c**		3 x 1 mark for each correct evaluation point related to **food products**. **Fact** — **factor relating to sugar substitute** **Opinion** — **positive/negative** **Consequence** — **Impact of the fact on the food product** **Positive** **P** 1. **Sugar substitutes** help reduce the sugar content of **food products** which is good **as** it will reduce the calorie content of foods. **P** 2. **Sugar substitutes** used in making **food products** have a lower/no energy value/ low calorific value so will be good **as** it will increase the range of weight reduction products **P** 3. **Sugar substitutes** used in **food products** do not contain (harmful/NME) sugars so will be good **as** they will help meet the demand for low sugar products/meet current dietary advice. **P** 4. Some **sugar substitutes** used to make **food products** do not need insulin to be metabolised which is good **as** it will increase the choice of foods available for diabetics. **P** 5. **Sugar substitutes** can enhance the sweetness of **food products** which is good **as** it will improve the flavour of foods making them more appealing. **P** 6. **Sugar substitutes** can be used in **food products** such as confectionary/baked products which is good **as** it will increase the range of 'healthy option' foods. **P** 7. Bulk sweeteners are used as **sugar substitutes** in **food products** (such as sugar free confectionery) which is good **as** it will increase the range of products that are low in sugar/sugar free eg sugar free confectionary	**3EV**	

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**c**		**(cont)** **Negative**		
		N	1. Some **sugar substitutes** can leave an unpleasant aftertaste so would not be good in **food products as** the aftertaste may reduce the number of repeat purchases.		
		N	2. Some **sugar substitutes** change the flavour of **food products** which is bad **as** other products may be favoured.		
		N	3. Some **sugar substitutes** (aspartame) which are used to produce **food products** have been linked to causing severe migraines/cancer **which** is bad as products containing sugar may be favoured.		
		N	4. When using **sugar substitutes** in **food products** at home recipes will need to be adapted which may be bad **because** they may be done incorrectly/food may be wasted.		
4	**d**		2 x 1 mark for **each correct** dietary factor. 2 x 1 mark for **each** explanation linked to the requirements of someone recovering from an illness (convalescent).	**4KU**	
		1	**Dietary factor – Good intake of calcium.** **Explanation** 1. Foods that contain a good supply of calcium should be eaten by a **convalescent** with a broken bone so that it heals strongly.		
		2	**Dietary factor – Good intake of protein.** **Explanation** 1. **Convalescent** should have a good protein intake to allow damaged cells and tissues to be repaired		
		3	**Dietary factor** – **Good intake of iron.** **Explanation** 1. **Convalescent** recovering from an operation/ accident should have a good supply of iron to help replace blood loss.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	d		**(cont)**		
		4	**Dietary factor – Good intake of Vitamin C** **Explanation** 1. **Convalescents** recovering from an operation/ accident should have a good supply of Vitamin C to help cuts/wounds heal quicker/ recover quicker. 2. **Convalescents** recovering from an operation/ accident should have a good supply of Vitamin C to help absorb iron/prevent anaemia.		
		5	**Dietary factor – Good intake of NSP/ dietary fibre** **Explanation** 1. Foods that supply a good source of NSP should be eaten as this will help prevent **convalescent** suffering from constipation. 2. Foods that supply a good source of NSP should be eaten as this will make the **convalescent** feel full/prevent snacking on fatty/sugary foods .		
		6	**Dietary factor – Increased intake of liquids should be included.** **Explanation** 1. **Convalescents** require plenty of liquids particularly those that supply energy/ vitamins/ protein as prevents dehydration.		
		7	**Dietary factor – Avoid foods high in fats/saturated fats.** **Explanation** 1. **Convalescents** should avoid foods with a lot of fat as they will not be as active as usual to use up all the energy/prevent obesity. 2. **Convalescents** should avoid foods with a lot of saturated fat to prevent cholesterol/ heart disease.		
		8	**Dietary factor – Avoid foods high in sugar.** **Explanation** 1. **Convalescents** should avoid foods with a lot of sugar as they will not be as active as usual to use up all the energy/prevent obesity.		
		9	**Dietary factor – Greasy foods should be avoided.** **Explanation** 1. **Convalescents** should avoid greasy foods as they may be difficult to digest.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**d**		**(cont)**		
		10	**Dietary factor** – **Spicy foods should be avoided.** **Explanation** 1. **Convalescents** should avoid highly seasoned spicy foods as these may upset the digestive system		
		11	**Dietary factor** – **Energy intake** **Explanation** 1. **Convalescents** should try to get energy from TCC rather than fats as they are less active so will not use energy gained from fats. 2. **Convalescents** should reduce total energy intake as they are less active so use less energy/avoids obesity weight gain.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	**e**		4 x 1 mark For correct explanation of responsibility of Department for Environment Food and Rural Affairs (DEFRA) For correct explanation of responsibility of Food Standards Agency(FSA) Minimum of one mark from each area.	**4KU**	
		i	**Department for Environment Food and Rural Affairs (DEFRA)** 1. The **Department for Environment Food and Rural Affairs** is responsible for the natural environment/biodiversity so protecting plants/ animals. 2. The **Department for Environment Food and Rural Affairs** is responsible for sustainable development and the green economy so protecting the environment. 3. The **Department for Environment Food and Rural Affairs** are responsible for promoting modem/adaptable farming methods by finding ways to prevent future animal/plant/fish disease. 4. The **Department for Environment Food and Rural Affairs** is responsible for protection of public health in relation to food and animal welfare by reducing/ controlling/protecting the risk of animal diseases being passed to humans. 5. The **Department for Environment Food and Rural Affairs** is responsible for ensuring high standards of animal welfare so that farm animals and fish are protected from unnecessary pain/ distress. 6. The **Department for Environment Food and Rural Affairs** is responsible for better management and use of natural resources such as energy/water/ fisheries/forests by trying to encourage positive environmental practices such as increasing household recycling/ composting. 7. The **Department for Environment Food and Rural Affairs** is responsible for improving air quality/preserving marine environment/reducing pollution so ensuring the protection/conservation of the environment. 8. The **Department for Environment Food and Rural Affairs** is responsible for promoting an effective/competitive water industry so ensuring high quality drinking water.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	e	i	**(cont)** 9. The **Department for Environment Food and Rural Affairs** is responsible for controlling chemicals/genetically modified organisms/ radioactive substances being released into the environment so protecting the environment. 10. The **Department for Environment Food and Rural Affairs** is responsible for trying to reduce rural poverty/address the needs of people living in rural areas to help in the development of the economy in rural areas. 11. The **Department for Environment Food and Rural Affairs** is responsible for safeguarding the supply of wholesome/varied/reasonable priced food and drink by promoting a competitive food chain. 12. The **Department for Environment Food and Rural Affairs** encourages the development of local, speciality/other value added products to promote the food chain. 13. The **Department for Environment Food and Rural Affairs** is responsible for modernising agriculture to increase competitiveness by promoting modern farming techniques in the UK and the EU. 14. **Department for Environment Food and Rural Affairs** is responsible for giving guidance within the food industry on a range of food (for example information for egg and poultry farmers/new EU beef labelling regulations/EU regulation on the protection of food names/ speciality food and drink sector.)		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	e	ii	**Food Standards Agency** 1. The **Food Standards Agency** is responsible for providing advice/ information to the public/ government on food safety. 2. The **Food Standards Agency** is responsible for the protection of the public in relation to food hygiene. 3. The **Food Standards Agency** is responsible for giving advice to the public on food safety and standards therefore raising awareness and educating the public. 4. The **Food Standards Agency** is responsible for representing the consumer in matters of food safety/ standards so the voice of the consumer is heard. 5. The **Food Standards Agency** is responsible for the licensing of meat processing companies to ensure hygiene controls on meat and meat products. 6. In Scotland the **Food Standards Agency** is responsible for dealing with issues relating to meat and meat products and/or regulation of animal feed. 7. In Scotland the **Food Standards Agency** is responsible for dealing with issues relating to food hygiene/novel foods/radiological safety/food emergencies. 8. The **Food Standards Agency** is responsible for controlling genetically modified food for human consumption/ animal feedstuff. 9. The **Food Standards Agency** is responsible for the advice on nutrient content of food/dietary issues/healthy eating. 10. The **Food Standards Agency** is responsible for monitoring of the composition of food additives. 11. The **Food Standards Agency** is responsible for the regulation/sale of natural mineral water/ bottled water/spring water. 12. The **Food Standards Agency** is responsible for commissioning research into food related matters so the industry and public are kept up to date with safety issues. 13. The **Food Standards Agency** is responsible for the licensing and inspection of manufacturers who produce irradiated foods. 14. The **Food Standards Agency** is responsible for supporting consumer choice through accurate/ meaningful food labelling/issuing leaflets/ posters.		

Question			Expected Answer/s	Max Mark	Additional Guidance
4	e	ii	**(cont)** 15. The **Food Standards Agency** is responsible for protecting the consumer through effective enforcement and monitoring of food related regulations/policies/legislation. 16. The **Food Standards Agency** is responsible for developing food labelling/labels to give more accurate information to help with safe storage of food/prevent food safety risks/outbreaks of food poisoning. 17. The **Food Standards Agency** is responsible for representing the UK on matters of food safety/ food standards in the EU and worldwide. 18. The **Food Standards Agency** is responsible for protecting the consumer against chemical contaminants in food.		

	Context:	**x**	**Health and Food Technology**
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Section A

Question	**Resource Management Unit**		**Consumer Studies Unit**		**Course Skills**		**Totals**
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
1	Causes of food poisoning	1			1		1
2	Functions and sources of the nutrients.	1			1		1
3	Dietary needs: pregnancy	1			1		1
4			Current voluntary food labelling	1	1		1
5	Use of DRV's	1			1		1
6	Functional properties of food.	1			1		1
7	Functional properties of food.	1			1		1
Totals		6		1	7	0	**7**

	Context:	**x**	**Health and Food Technology**
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Section A (continued)		

Question	**Resource Management Unit**		**Consumer Studies Unit**		**Course Skills**		**Totals**
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
8			Consumer Protection from Unfair Trading Regulations 2008	1	1		1
9	Inter-relationship of: water and dietary fibre	2			2		2
10			The impact of technological developments on consumer choice of food	2	2		2
11	Prevention of dietary diseases: CHD	2			2		2
12	Dietary needs: infants	2			2		2
13	Product development strategy	2			2		2
14			The impact of technological developments on consumer choice of food	2		2	2
Carried forward		6		1	7	0	**7**
Totals		14		6	18	2	**20**

Context:	**x**	**Health and Food Technology**
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Section B Question 1

Question	Resource Management Unit		Consumer Studies Unit		Course Skills		Totals
	Course content	Mark	Course content	Mark	Knowledge	Evaluation	
1a	Use of DRVs – teenager	6				6	6
b	Prevention of dietary diseases: obesity	6			6		6
c	Function and sources of nutrients	4				4	4
d	Effects of cooking on nutrients	4			4		4
Totals		20		0	10	10	**20**

	Context:	**x**	**Health and Food Technology**
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Section B Question 2			

Question	**Resource Management Unit**		**Consumer Studies Unit**		**Course Skills**		**Totals**
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
a)	Product development strategy	6			6		6
b)	Sensory testing	5				5	5
c)			Role and responsibilities of Environmental Health Department (EHD)	3	3		3
d)			The impact of technological developments on consumer choice of food	4		4	4
e)			The consumer within the European dimension	2	2		2
Totals		11		9	11	9	**20**

Context:	**x**	**Health and Food Technology**
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Section B Question 3

Question	Resource Management Unit		Consumer Studies Unit		Course Skills		Totals
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
a)	Causes of food poisoning	6			6		6
b)	The use of DRV,s and awareness of needs for: vegetarians	4				4	4
c)			Food politics	4	4		4
d)			Factors which influence consumer choice of food	4		4	4
e)	Functional properties of food.	2			2		2
Totals		12		8	12	8	**20**

Context:	**x**	**Health and Food Technology**
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Section B Question 4

Question	Resource Management Unit		Consumer Studies Unit		Course Skills		Totals
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
a)	Current dietary advice	5				5	5
b)			The impact of technological developments on consumer choice of food	4	4		4
c)	Functional properties of food	3				3	3
d)	The use of DRV,s and awareness of needs for: convalescents	4			4		4
e)			Role and responsibilities: DEFRA & FSA	4	4		4
Totals		12		8	12	8	**20**

Context:	**x**	**Health and Food Technology**
Higher Home Economics. Analysis of the 2012 Question Paper		

Question Paper Summary: Mark Allocation

Question	Unit title		Course Skills		Totals
	Resource Management	**Consumer Studies**	**Knowledge**	**Evaluation**	
Section A	14	6	18	2	**20**
Section B					
1	20	0	10	10	**20**
2	11	9	11	9	**20**
3	12	8	12	8	**20**
4	12	8	12	8	**20**
Totals	**57-58**	**22-23**	**51-52**	**28-29**	
Target Range	**50 – 60 marks**	**20 – 30 marks**	**50 – 55 marks**	**25 – 30 marks**	**80**

[END OF MARKING INSTRUCTIONS]