2014 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. Sunlight/sunshine 2. Ultraviolet light/UV rays 3. Margarine 4. Egg yolks/eggs 5. (Fortified) breakfast cereals 6. (Fortified) orange juice 7. (Fortified) fat spreads 8. (Fortified) yogurts 9. (Fortified) infant milk 10. Powdered milk 11. Whole milk 12. Semi Skimmed milk 13. Milk/Milk Products 14. Yogurt Drinks 15. Oily fish (accept examples) 16. Cod/Halibut liver oils/fish oils 17. Mushrooms 18. Cheese 19. Beef liver **1 mark** for correct source	**1**	
2			1. Nausea 2. Vomiting 3. Diarrhoea 4. Stomach cramps 5. Abdominal pain 6. High temperature 7. Muscle pain 8. Chills/shivering 9. Fever 10. Headache 11. Exhaustion 12. Dizziness 13. Flu like symptoms 14. Confusion 15. Septicaemia 16. Pneumonia 17. Loss of appetite 18. Coma **1 mark** for correct symptom.	**1**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
3			1. Helps prevent dehydration/hydrates the body 2. Helps produce all body fluids (digestive juices/mucus/plasma/saliva/blood/lymph/ sweat/urine) 3. Helps assist the removal of waste/faeces 4. Helps make faeces soft/bulky 5. Helps regulate body temperature 6. Helps to keep joints/membranes lubricated 7. Helps to remove waste/toxins/detox the body 8. Helps carry nutrients to body cells/round the body/dissolve some nutrients 9. Helps keep linings of mucus membranes/digestive tract/bronchial tubes moist 10. Helps improve the absorption of water soluble vitamins/vitamin B complex/vitamin C 11. Helps reduce the risk of constipation/bowel disorder/diverticulitis/combines with NSP to reduce risk of bowel disorders 12. Helps improve brain function 13. May help behaviour/concentration 14. Helps improve the digestion of food 15. Required for many metabolic reactions **1 mark** for correct benefit.	**1**	
4			1. Improves wages of workers in third world countries. 2. Improves conditions of workers in third world countries. 3. Encourages organic farming. 4. Can provide better quality food. 5. Fairer as it provides a minimum wage. 6. Helps alleviate poverty. 7. Consumers are reassured that food production is environmentally friendly. 8. Helps to support sustainable development. **1 mark** for correct benefit of Fair Trade foods.	**1**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
5			1. Soil 2. Dust 3. Spices 4. Vegetables/salad/potatoes 5. Dairy products (accept examples) 6. Eggs 7. Cereals/rice/potatoes/cornflour 8. Cornflour sauces/custard 9. Puddings 10. Cooked rice dishes 11. Unpasteurised milk **1 mark** for correct source.	**1**	
6			**C**oronary **H**eart **D**isease **1 mark** for correct abbreviation.	**1**	
7			(Defence under the Food Safety Act 1990), where a food business/food worker can prove they took all reasonable steps/checks/HACCP were taken to prevent an offence/food poisoning. **1 mark** for correct explanation.	**1**	
8			Hydrogenation **1 mark** for correct process.	**1**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
9			1. Use of artificial sweeteners/sugar substitutes 2. Bulk sweeteners used in production of confectionary/jam/health foods/weight reduction products 3. Intense sweeteners used in production of soft drinks/yogurts/ice creams 4. Addition of natural sweeteners/dried fruit 5. Use of natural fruit juice to sweeten foods 6. Use of spices/flavourings to enhance taste 7. Breakfast cereals/biscuits/desserts have reduced sugar claims 8. Reduced-sugar products, eg fruit can be tinned in natural juice/apple juice/reduced-sugar jam 9. Gradual reduction of sugar content in food products **2 x 1 mark** for **each** identified way.	**2**	
10			1. Allocate a clear/quiet room for test 2. Use controlled conditions/separate booths for each taster 3. Check everyone can taste the product/no allergies 4. Do not allow tasters who are unwell (colds, upset stomachs) to taste 5. Ensure that tasters know what is expected of them 6. Use clean spoons/separate dishes for each taster 7. Ensure water/dry biscuit are available between tasting different products 8. Label the foods with random letters or numbers 9. Serve all samples in the same way (eg same size/plate/temperature) 10. Ask tasters to test one product at a time 11. Allow a maximum of six samples 12. Ensure that record sheets/pens are available 13. Allow time for tasters to record each result **2 x 1 mark** for **each** procedure.	**2**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
11			1. Responsible for employing Environmental Health Officers 2. Responsible for enforcing the Food Safety Act 1990 3. Responsible for food safety control by investigating complaints made from the general public 4. Regularly inspecting food manufacturers/ retailers/catering outlets without warning 5. Protect public health as officers can enter food premises, take away food samples to be tested/condemn foods/make videos to record what they see 6. Officers responsible for issuing improvement notice to food premises 7. Officer can serve an emergency prohibition notice closing premises immediately/banning use of equipment/processes 8. Employing officers who deal with pollution control/noise control 9. Preventing food poisoning outbreaks 10. Employing officers who deal with pest control 11. Employing officers who deal with local environment (eg rubbish collection) 12. Provide education on local environment/public health/food safety issues **2 x 1 mark** for **each** identified responsibility.	**2**	
12			1. The colour of the food may change 2. Food will become brittle (herbs)/hard (dried pulses)/dries up/loss of moisture/may crumble (coffee granules) 3. Food may wrinkle/shrink in size 4. Become lighter in weight 5. Food becomes sweeter/more salty/more concentrated 6. Some vitamin C/vitamin B1 (thiamine)/water soluble vitamins may be lost 7. Last longer/preserved 8. Reduces bacterial growth **2 x 1 mark** for **each** effect.	**2**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
13			1. Helps food businesses plan how they will promote/advertise a product 2. Helps the food industry find out if a new product is a good idea 3. Ensures that the development of a product is profitable 4. Helps manufacturers identify market trends/what the consumer wants/what meets their needs 5. Helps manufacturers identify how much consumers are willing to spend 6. Helps manufacturers identify competition so they can improve product/find a gap in the market 7. Establishes an idea of when to introduce the food product to the market 8. Can establish reasons for a drop in sales of a food product 9. Consumers' opinion can be analysed whilst product is still being developed 10. Ensures food product will be successful in the market place **2 x 1 mark** for **each** benefit.	**2**	
14			**Advantages** 1. High-quality ingredients are used so products are generally of a higher quality. 2. Less use of additives so seen as being healthier by the consumer 3. Increases the choice of food 4. Foods are usually easy to use/prepare/cook so saving time 5. Many are microwaveable so suit the consumer who needs food quickly/who do not have many food preparation skills 6. Microwaveable chilled products use less energy so reduces fuel costs 7. Heated in the microwave in their original packaging so saving on washing up 8. Eaten in the original packaging so saving on washing up 9. Available in 'healthier' food ranges/ vegetarian options so giving greater choice 10. Cook chill foods are produced in small portion sizes so useful for single people/elderly/those with physical disabilities	**2**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
14			**(cont)** 11. Cook chill foods may work out cheaper than buying individual ingredients 12. Quick method of processing means there is less loss of nutrients for the consumer 13. Chilling does not affect food quality/colour/ flavour/texture/nutritional value 14. Strict hygiene conditions during production/storage reduces food poisoning 15. Chilling is not as expensive a process as freezing, therefore it should be slightly cheaper for the consumer 16. May have a longer shelf life than fresh 17. May be frozen **Disadvantages** 1. Must be refrigerated 2. Chilled foods require reheating, if this is not adequate/incorrect bacteria will not be destroyed/consumer may suffer from food poisoning 3. Chilled foods have a shorter shelf-life than frozen foods 4. Short shelf-life may make them unsuitable for bulk purchase/frequent shopping trips for the consumer 5. Chilled products require a lot of packaging which may be unacceptable to consumers concerned about environmental issues 6. If using cook chill for a number of people, then it is more expensive than cooking from raw ingredients 7. Some do not meet current dietary advice (accept related valid answer) 8. If cooking instructions are not followed food could be inedible **1 mark** for advantage. **1 mark** for disadvantage.		

Section B

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(a)			6 EV	

Opinion	High/low than RNI/EAR for nutrient**.** Good/bad for the person
Fact	Function of the nutrient
Consequence	Impact on health/wellbeing of the fact linked to the overweight boy

6 x 1 mark for **each** point of evaluation which makes reference to the needs of an overweight boy

(Headings have been provided to assist marking but are not required to be provided by the candidate)

Energy (High)

Positive

P 1. Energy intake is **higher than** the recommended EAR which **may be good as** energy is required for all activities so if the **overweight boy** is active/takes part in sports the extra calories may be burned off and **so** helping to reduce additional weight gain.

Negative

N 1. Energy intake is **higher than** the EAR which **is bad as** energy is required for all activities and the excess energy/calories not used at school/play could result in the **overweight boy** becoming more overweight/becoming obese/develop hypertension/CHD in later life.

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	a		**(cont)** **Protein (High)** **Positive**		
		P	1. Protein intake **is high,** this is **good** for the **overweight boy as** protein is required for growth/repair/maintenance of body tissues he will still be growing and **so** it would help with growth (if he is going through a period of rapid growth)/proper development.		
		P	2. Protein intake **is high,** this is **good** for the **overweight boy as** protein is required for growth/repair/maintenance of body cells **so** if he becomes physically active/injures himself this will help with growth/repair of cell tissue.		
		P	3. Protein intake **is high** and this is **good** for the **overweight boy as** it could assist the absorption of calcium (**which** is necessary in the development of strong teeth/bones) **so** may prevent him suffering from osteoporosis/ osteomalacia in later life.		
			Negative		
		N	1. Protein intake **is high** this is **bad** for the **overweight boy** and **as** excess protein may be used as a secondary source of energy **as** he may be inactive this may result in the boy being even more overweight/becoming obese/develop hypertension/CHD in later life.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(a)		**(cont)** **Vitamin B1 (Low)** **Negative**		
		N	1. Vitamin B1 intake is **lower** this is **bad** for the **overweight boy as** it is needed to release energy from carbohydrates **so** he may not have sufficient energy to participate in sports/activities increasing his risk of gaining more weight/becoming obese.		
		N	2. Vitamin B1 intake is **lower** this is **bad because** it is required for normal growth in children **so** may affect the **overweight boy's** ability to grow normally.		
		N	3. Vitamin B1 intake is **lower** this is **bad** for the **overweight boy as** it is required for growth/normal functioning of the nervous system **so** may increase the risk of Beri Beri/neuritis.		
		N	4. Vitamin B1 intake is **lower** this is **bad** for the **overweight boy as** it is required for normal functioning of the brain **therefore** may reduce his ability to concentrate/result in poor memory while at school.		
			Phosphorus (High) **Positive**		
		P	1. Phosphorous intake **is higher** this may **be good** for the **overweight boy as** phosphorus is needed to work with calcium in the formation/development/maintenance of bones/teeth **as** he will be growing rapidly this may reduce his risk of osteoporosis/ osteomalacia in later life/help bone fractures heal/prevent dental caries.		
		P	2. Phosphorous intake **is higher** this may **be good** for the **overweight boy as** it is needed to help release energy from the cells **so** preventing the boy from becoming tired/taking part in activities.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(a)		**(cont)** **Vitamin A (Low)** **Negative**		
		N	1. Vitamin A intake **is low** this is **bad** for the **overweight boy as** vitamin A is required for manufacture of visual purple **so** the boy may suffer from poor vision in dim light/night blindness.		
		N	2. Vitamin A intake **is low** this is **bad** for the **overweight boy as** vitamin A is required for the maintenance of healthy skin **so** the boy may be at an increased risk of skin infections.		
		N	3. Vitamin A intake **is low** this is **bad** for the **overweight boy as** vitamin A is required for normal growth of children **therefore** if this continued then the boys growth may be stunted.		
		N	4. Vitamin A intake **is low** this is **bad** for the **overweight boy as** vitamin A is required for the production of mucus secretions in the eyes/lungs/throat/digestive tract **so** increasing his rick of infection.		
		N	5. Vitamin A intake **is low** this is **bad** for the **overweight boy as** vitamin A is an antioxidant vitamin **which** means he could have an increased risk of suffering from cancers/coronary heart disease in later life.		
			Saturated Fat (High) above the recommended 11% of total food energy. **Negative**		
		N	1. Saturated fat content **is high which is bad as** it provides the **overweight boy** with a concentrated source of energy which if not used will be stored as fat **so** increasing his risk of obesity/weight gain.		
		N	2. Saturated fat content **is high which is bad** for the **overweight boy as** it may increase his cholesterol levels **so** increasing his risk of blood clots/blockage of the artery/coronary heart disease in later life/cancer (bowel).		
		N	3. Saturated fat content **is high which is bad** for the **overweight boy as** the fat may form insoluble soaps preventing calcium absorption/hinder the absorption of calcium **therefore** increasing his risk of osteoporosis/osteomalacia in later life.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(a)		**(cont)** **Iron (Low)** **Negative**		
		N	1. Iron content **is low** which **is bad** for the overweight boy **as** iron is needed to produce haemoglobin/red blood cells **therefore** increasing the risk of anaemia/tiredness.		
		N	2. Iron content **is low** which **is bad** for the overweight boy **as** iron is needed to produce haemoglobin/red blood cells which transport oxygen around the body **therefore** may increase tiredness/prevent participation in sports/physical activity.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(b)		**4 x 1 mark** for the correct effect on **each** nutrient. Minimum of **1 mark** to come from **each** nutrient.	**4 KU**	
		(i)	**Vitamin C** 1. Vitamin C is destroyed at low temperatures. 2. When foods containing vitamin C are added to boiling water the enzyme oxidase is denatured which destroys vitamin C. 3. When food containing vitamin C is kept warm the vitamin C becomes oxidised. 4. Vitamin C is water soluble so will be lost in cooking water due to leaching. 5. Steaming/microwaving/stir frying will reduce the loss of vitamin C.		
		(ii)	**Starch** **Dry Heat** 1. Starch changes to dextrin when foods are heated/cooked by roasting/baking/toasting. 2. The surface of any baked item changes to dextrin/golden brown colour. 3. Dextrinisation caused by dry heat contributes to the colour of foods. **Moist Heat** 1. Starch grains soften/swell to absorb water. 2. Starch grains burst/rupture releasing starch so forming a gel. 3. Gelatinisation occurs when starch granules absorb water/swell which thickens the mixture. **General** Overheating of starch causes charring/black/ damage to its structure/nutritive value to be lost.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(c)			4 EV	

Fact	contribution/function of NSP
Opinion	good/bad
Consequence	Consequence/impact of NSP on health/diet

4 x 1 mark for **each** point of evaluation which makes reference to NSP in the diet.

Positive

P 1. NSP aids the removal of waste from the body which is **good as** ensures toxins are removed/prevents bowel disorders.

P 2. NSP helps absorb water ensuring faeces are soft/bulky which is **good as** it enables them to pass out of the body (by use of peristalsis)/keeps the gut in good working order.

P 3. NSP works with water to keep faeces soft/bulky which is **good as** it helps prevent bowel disorders/haemorrhoids (piles).

P 4. NSP gives a feeling of fullness/bulk in the diet which is **good as** it may help prevent snacking so reducing the risk of obesity/dental caries/coronary heart disease (CHD).

P 5. NSP helps slow down digestion which is **good as** this may help control blood sugar/diabetes.

P 6. Foods containing NSP may provide extra nutrients this is **good as** it may contribute to a balanced diet.

P 7. Foods rich in NSP may give the foods a nutty flavour this is **good as** it may increase variety in the diet.

P 8. Foods containing NSP may have a rough texture this is **good as** it may provide variety in the diet.

P 9. Foods containing NSP may have a darker colour/speckled this is **good as** it may make the food more appealing.

Negative

N 1. NSP binds with iron/hinders the absorption of iron which is **bad as** this may increase the risk of anaemia.

N 2. NSP forms insoluble soaps with calcium/hinders the absorption of calcium which is **bad as** may increase the risk of dental caries/osteoporosis/osteomalacia.

N 3. A lack of NSP in the diet would be **bad as** water would not be absorbed increasing the risk of bowel disorders/haemorrhoids (piles).

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	c		**(cont)** **Negative**		
		N	4. A lack of NSP in the diet would be **bad as** people may snack more often increasing the risk of obesity/dental caries/coronary heart disease (CHD).		
		N	5. Foods rich in NSP have a darker colour, this may be **bad as** people may not like the appearance/avoid choosing these foods.		
		N	6. Foods containing NSP may have a rough texture, this may be **bad as** it may not be liked.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(d)		**3 x 1 mark** for **each** factor **3 x 1 mark** for **each** explanation which identifies how the factor contributes to **hypertension**. Factor must be identified before mark can be awarded for explanation. Where factor is incorporated into the explanation this can be credited.	**6 KU**	
		1	**Factor – High salt/sodium intake** **Explanation** 1. A high intake of salt/sodium in the body can lead to a rise in the blood pressure (passing through narrower arteries), which could result in **hypertension**. 2. A high intake of salt/sodium in the body causes the body to retain water, (this extra water stored can raise blood pressure), which could result in **hypertension**.		
		2	**Factor - High saturated fat intake/high cholesterol intake** **Explanation** 1. A high saturated fat intake in the diet may contribute to **hypertension** as cholesterol found in saturated fats can narrow arteries/restrict blood flow causing blood pressure to increase.		
		3	**Factor – High total fat intake** **Explanation** 1. A high fat intake in the diet may contribute to **hypertension** as cholesterol found in saturated fats can narrow arteries/restrict blood flow causing blood pressure to increase. 2. A high fat intake in the diet may mean that a person will be overweight and being overweight can cause a rise in blood pressure/**hypertension**.		
		4	**Factor - High intake kilojoules/kilocalories/ energy foods/sugar** **Explanation** 1. A high intake of kilojoules/kilocalories may mean that a person will be overweight and being overweight can cause a rise in blood pressure/**hypertension**.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	(d)		**(cont)**		
		5	**Factor – High intake of caffeine** **Explanation** 1. Consuming high energy drinks/tea/coffee can lead to a temporary rise in blood pressure, which could result in **hypertension**.		
		6	**Factor – High intake of alcohol** **Explanation** 1. If too much alcohol is consumed over time, this can lead to a rise in blood pressure which could result in **hypertension**. 2. Alcohol is high in kilojoules/kilocalories and if consumed in excess may mean that a person will be overweight which may cause a rise in blood pressure/**hypertension**.		
		7	**Factor - High consumption of ready meals/ fast/manufactured/processed foods** **Explanation** 1. Convenience foods tend to be high in salt/sodium therefore as consumers are eating more of these products this can lead to a rise in the blood pressure/**hypertension** 2. Convenience foods can be high in fat/calories leading to a person being overweight causing a rise in blood pressure/ **hypertension**.		
		8	**Factor - Lack of potassium** **Explanation** 1. Potassium in the diet tends to reduce blood pressure therefore a lack of potassium in the diet may contribute to **hypertension**.		
		9	**Factor – Low intake of fruit and vegetables** **Explanation** 1. Fruit and vegetables can be high in potassium which helps reduce the negative effects of salt in the diet therefore a diet low in fruit and vegetables could result in **hypertension**.		

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 cupcake The stage must be identified before mark can be awarded for explanation. Where the stage is incorporated in the explanation this can be credited.	**6 KU**	
		1	**Stage – Concept Generation** **Explanation** 1. This is when the company will develop ideas for the **cupcake**. 2. This is the thinking stage/thinking up new ideas for the **cupcake**. 3. The development of ideas from market research, for a new **cupcake**. 4. Disassembly of a popular existing **cupcake** can establish why certain characteristics are popular/assist manufacturers in creating a new **cupcake**. 5. The **cupcake** has to be new so this stage ensures manufacturers do not replicate existing **cupcakes.** 6. The cost/portion size/flavour/texture/ appearance of the **cupcake** can be considered. 7. The development process of the **cupcake** cannot take place without this stage.		
		2	**Stage - Concept Screening** **Explanation** 1. All ideas for the **cupcake** are considered some are kept and some are disregarded. 2. A specification is compiled for the **cupcake.** 3. The specification allows the manufacturer to discard ideas that do not meet the specification for the **cupcake**.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	(a)		**(cont)**		
		3	**Stage - Prototype Production** **Explanation** 1. The prototype/example/sample **cupcake** is developed. 2. The prototype/example/sample **cupcake** is measured against the specification. 3. The prototype/example/sample **cupcake** is tested for appeal and may be further modified/rejected. 4. It enables testing to be carried out to avoid costly mistakes before the first production run of the **cupcake**. The production run for the **cupcake** is tested.		
		4	**Product Testing** 1. A range of **cupcakes** are tested by market/various ages/tasting panels so opinions can be obtained. 2. Sensory testing of the **cupcake** allows for refining/improvements/modifications of the recipe as a result of consumer opinion. 3. A final prototype of the **cupcake** is trialled.		
		5	**Information and advertising materials designed for packaging** 1. Food labels in compliance with food labelling regulations will be designed for the **cupcake**. 2. Suitable packaging will be developed/investigated/costed and produced for the **cupcake**. 3. The legal and advertising team will begin to develop materials/plan for selling the **cupcake**. 4. Allows the advertising team to cost the advertising programme and the packaging for the **cupcake**.		
		6	**First Production Run** 1. The new **cupcake** will be produced in bulk in a factory and can be assessed. 2. Quality assurance will be carried out to ensure the **cupcake** is an acceptable standard for sale. 3. This is an important stage in the manufacturer of the **cupcake** as it affects other stages (eg if ingredients changed label needs to be changed).		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(a)**		**(cont)**		
		7	**Marketing Plan** 1. The marketing team meet to decide about the pricing of the **cupcake** (eg low cost to attract interest/medium to high cost to imply luxury). 2. An advertising/marketing plan is created to help launch the **cupcake**. 3. The marketing team meet to decide a range of ways to promote the **cupcake**.		
		8	**Launch** 1. Food exhibitions/store launch/press release may be selected as the most suitable method to launch the **cupcake**. 2. Range of promotional techniques may be used to promote the sale of the **cupcake** (in store tasting/special offers/money-off coupons/television advertisements). 3. Market research will be carried out to check sales figures of the **cupcake**. 4. Important stage of the development process as the **cupcake** is now on sale/launched on the market place. 5. Piloting of the **cupcake** may be carried out to gauge the success of the product/monitor sales initially.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(b)**			**5 EV**	

Fact	Understanding of the rating
Opinion	Positive/negative
Consequence	How this impacts the toddler

5 x 1 mark for **each** valid evaluation point linked to the suitability of the **celebration cupcake** for **toddlers.**

1 **Crunchiness (4 high)**

Negative

N 1. The **celebration cupcake** has a high score for crunchiness, this is **bad as** it indicates there may be bits within/on top of the **cupcake** which may make it unappealing to the **toddler** as they may not like the texture.

N 2. The **celebration cupcake** has a high score for crunchiness, this is **bad as** it indicates there may be bits within/on top of the **cupcake** which could cause the **toddler** to choke.

N 3. The **celebration cupcake** has a high score for crunchiness, this is **bad as** it indicates there may be sweet decorations on top of the **cupcake** which may be high in sugar **so** increasing the risk of tooth decay in the **toddler**.

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	(b)		**(cont)** **Positive**		
		P	1. The **celebration cupcake** has a high score for crunchiness, this is **good as** may indicate toppings so **toddler** may enjoy the contrast of textures within the **cupcake**.		
		P	2. The **celebration cupcake** has a high score for crunchiness, this is **good as** it may indicate a topping/decorations on the **cupcake which** may appeal to the **toddler**.		
		2	**Colour (1 very low)**		
			Negative		
		N	1. The **celebration cupcake** has a very low score for colour, this is **bad because toddlers** are attracted to colourful foods so he/she may not be interested in eating the **cupcake**.		
			Positive		
		P	1. The **celebration cupcake** has a very low score for colour, this is **good as** colouring may be natural so less likely to irritate asthma/eczema/hyperactivity/allergies in **toddler**.		
		P	2. The **celebration cupcake** has a very low score for colour, this is **good as** it means there may be no colouring additives present so less likely to cause hyperactivity/allergies in the **toddler**.		
		3	**Aroma (2 low)**		
			Negative		
		N	1. The **celebration cupcake** has a low score for aroma, this is **bad as** the **toddler** may not be tempted to try as it has no recognisable smell.		
			Positive		
		P	1. The **celebration cupcake** has a low score for aroma, this is **good as** it indicates there is no strong smell/unpopular smell **which** may discourage the **toddler** from eating.		
		4	**Flavour (2 low)**		
			Negative		
		N	1. The **celebration cupcake** has a low score for flavour, this is **bad as** it may have little taste which may discourage **toddler** to experience different tastes **so** reducing the flavours they like/causing waste/not be repurchased.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	(b)		**(cont)**		
			Positive		
		P	1. The **celebration cupcake** has a low score for flavour, this is **good as** it may mean there are no artificial flavourings present **therefore** reducing the risk of skin rashes/asthma attacks/headaches/behavioural problems in the **toddler**.		
		P	2. The **celebration cupcake** has a low score for flavour, this is **good as** it indicates there is no strong taste **which** may discourage the **toddler** from eating/cause waste.		
		5	**Sweetness (5 very high)**		
			Negative		
		N	1. The **celebration cupcake** has a very high score for sweetness, this is **bad** for the **toddler** as it may be high in sugar **therefore** could cause tooth decay/obesity/(type 2) diabetes later in life.		
		N	2. The **celebration cupcake** has a very high score for sweetness, this is **bad as** he/she may form a liking for very sweet foods **therefore** the **toddler** may become dependent on a sweet tooth craving.		
			Positive		
		P	1. The **celebration cupcake** has a very high score for sweetness, this is **good as** most **toddlers** like sweet flavours so will want to eat it.		
		P	2. The **celebration cupcake** has a very high score for sweetness, this is **good as** it indicates it may contain sugar **which** could provide a quick energy source for an active **toddler**.		
		6	**Moistness (5 very high)**		
			Negative		
		N	1. The **celebration cupcake** has a very high score for moistness, this may be **bad** for the **toddler** as the moistness in the **cupcake** may come from a high fat content **which** could contribute to obesity in later life.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(b)**		**(cont)** **Positive**		
		P	1. The **celebration cupcake** has a very high score for moistness, this is **good** for the **toddler** as a moist cake may be easier to eat **so** reducing the risk of choking on dry crumbs. 2. The **celebration cupcake** has a very high score for moistness, this is **good as** the **toddler** may be used to eating moist textures **so** will not struggle and will enjoy eating the **cupcake**. 3. The **celebration cupcake** has a very high score for moistness, this is **good as** it will have better keeping properties **so** may be purchased/stored in advance until required by the **toddler**.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(c)**		**2 x 1 mark** for **each** explanation linking available income to consumer choice of **food**. **2 x 1 mark** for **each** explanation linking nutritional knowledge to consumer choice of **food**.		
2	**(c)**	**i**	**Available income** 1. Amount of money available to the consumer can restrict/improve the options of **quantity/quality/variety/brand of food which** can be purchased/chosen. 2. High fat/sugar **food** tend to be cheaper **therefore** may be purchased/chosen by the consumer if there is a limited income. 3. **Fresh fruit/vegetables/previously untried foods** may not be purchased/chosen by the consumer for fear of waste **if** income/money is limited. 4. **Ready meals** may be chosen, as it may be cheaper for the consumer to purchase a ready meal for one rather than prepare/cook from scratch **if** income/money is limited. 5. Consumers with high disposable income/two household wages may result in more money being available for **read meals/convenience foods/better brand foods/exotic fruits/functional foods/organic foods as** there is more money available. 6. Consumers with high disposable income/two household wages may result in more money being available **so** choosing to **eat out in restaurants**. 7. Consumers with high income may travel abroad **so** may choose ethnic/foreign **foods** when they return home. 8. Restricted income/unemployment may mean that consumers rely on special offers/price reductions/product promotions when choosing the **food so** saving money.	**2 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(c)**		**(cont)**		
2	**(c)**	**ii**	**Nutritional knowledge** 1. Consumers who have good nutritional knowledge may avoid choosing **foods** which are high in salt/choose low-salt foods **so** reducing risk of high blood pressure. 2. Many consumers have an increased awareness of the health benefits of certain **foods** and **so** may purchase low fat/low sugar/low salt/high fibre foods. 3. Consumers who have good nutritional knowledge may choose high protein **foods to** assist with growth/development of their children. 4. Parents who have good nutritional knowledge may choose **foods** fortified with omega 3 **as** this may help brain development in their children. 5. Consumers who have good nutritional knowledge may choose a **food** product/yogurt which is fortified with calcium and vitamin D **as** this helps improve calcium absorption. 6. Knowledgeable consumers will be able to choose iron rich **foods to** aid family/friends suffering from iron deficiency anaemia. 7. Consumers who are pregnant may choose **foods** fortified with folic acid **to** ensure proper development of baby. 8. Consumers who are nutritionally aware may purchase functional **foods which** may help to lower cholesterol/provide additional nutrients in the diet. 9. Consumers with good nutritional knowledge may read nutritional labelling on **food** packets to make comparisons/choose healthier food items/food **to** benefit their health. 10. Some **foods** are fortified with nutrients and may be chosen by the consumer **as** they give health benefits to the body. 11. Consumers may not be aware that nutritional content can vary between fresh/frozen and processed **foods so** may not make wise choices.	**2 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(c)**	**(ii)**	**(cont)** 12. Consumers who lack nutritional knowledge may choose **foods** high in fat/sugar/salt/low in TCCs/oily fish/fruit and vegetable **which** may increase their risk of diet related diseases/coronary heart disease/ obesity/hypertension/stroke/dental caries. 13. Nutritional labelling on **food** may not be easily understood by some consumers and **so** may not assist them to make healthier choices.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(d)**			**3 EV**	

Opinion	Positive/negative for consumer
Fact	Fact relating to information on label
Consequence	Consequence for consumer of food labelling fact

3 x 1 mark for **each** valid evaluation point linked to usefulness of **each** label to the consumer.

2	**(d)**	**(i)**	**Bar Code** **Positive** **P** 1. **Bar codes** on food labels allow products to be electronically scanned, this is **good as** less time is wasted by the **consumer** at the point of sale/checkout. **P** 2. **Bar codes** on food labels contain current pricing information, this is **good as** less chance of the **consumer** being wrongly charged at the point of sale/checkout when choosing products. **P** 3. **Bar codes** on food labels allow for better stock control, this is **good as** it ensures the **consumer** will have an adequate choice/range of goods available to them in the store. **P** 4. **Bar codes** on food labels allow some stores to offer self-scanning of chosen products, this is **good as** it can speed up the shopping process for the **consumer**. **P** 5. **Bar codes** on food labels allow some stores to offer self-scanning of chosen products, this is **good as** it may help/make it easier for the **consumer** to follow a budget. **P** 6. **Bar codes** on food labels allow some stores to offer self-scanning of chosen products, this is **good as** it may help keep children occupied/make it fun for children when shopping with **parents**.

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(d)**		**(cont)**		
		P	7. **Consumers** can use iPhones/smart phones to scan **bar codes** on food labels, this is **good as** it can allow for price comparisons which saves money.		
		P	8. **Consumers** can use iPhone app to read **bar codes** on food labels, this is **good as** it will enable consumers to add items to online shopping basket/home delivery order instantly.		
			Negative		
		N	1. **Bar codes** on food labels can often be damaged/scratched/dirty/crumpled, this is **bad** as product cannot be scanned **therefore consumer** may not choose the product as delays may occur at the checkout.		
		N	2. **Bar codes** on discounted food labels can often be difficult to scan, this is **bad as consumer** may be delayed at the checkout.		
		N	3. When **bar coded** products are discounted, employees may forget to code in discount price, this is **bad** to the **consumer as** it can lead to confusion/delays at the checkout with chosen product.		
		N	4. **Bar codes** on food labels have allowed stores to introduce self-scanning tills, this is **bad as** there is a reduction of staffed tills which forces the **consumer** to use these causing delays **as** some codes have to be confirmed.		
		N	5. **Bar codes** on food labels allow some stores to offer self-scanning of chosen products, this is **bad as** errors can easily be made causing stress/delays for the **consumer**.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(d)**		**(cont)**		
2	**(d)**	**(ii)**	**Recycling** **Positive**		
		P	1. **Recycling/disposable symbols** on food labels are **good as consumer** may be environmentally conscious **therefore** more likely to purchase product.		
		P	2. **Recycling glass symbol** on food labels are **good as** it informs the consumer that the packaging has been made from recycled glass **therefore** this may encourage choice as the product is more environmentally friendly.		
		P	3. **Recycling symbols** found on food labels are **good as** it informs the consumer that some packaging is compostable **therefore** can be put in home composting bins/local authority brown bins.		
		P	4. **Recycling symbols** found on food labels are **good as** it may indicate that recycled materials have been used for that package **therefore consumer** can recycle it again rather than landfill.		
		P	5. **Recycling symbols** found on food labels are **good as** it may indicate that plastic food packaging can be recycled **therefore consumer** can recycle, reducing the amount of waste sent to landfill.		
		P	6. **Recycling symbols** found on food labels are **good as** it may indicate that cans are made from aluminium/steel **which** may encourage **consumer** to recycle in blue/local authority bins/recycling points.		
			Negative		
		N	1. **Recycling/disposable symbols** on food labels may be **bad** for the **consumer because** although they may recognise a symbol, they may find it hard to decipher therefore not refer to it/recycle.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(d)**		**(cont)**		
2	**(d)**	**(iii)**	**Date mark** **Positive**		
		P	1. Food labels must display a **use by date** on (highly) perishable foods, this is **good as** it allows **consumers** to know when food must be eaten by/if it's safe to eat **so** helping to prevent food poisoning.		
		P	2. Food labels must display a **use by date** on (highly) perishable foods, this is **good as** it allows **consumers** to decide whether to cook/freeze foods safely before the use by date/avoiding waste of food/money/providing food for a later date.		
		P	3. Food labels must display a **best before/use by date**, this is **good as** it allows **consumers** to plan/purchase food according to their requirements/avoiding waste of food/money.		
		P	4. Food labels must display a **best before** date, this is **good as** it allows **consumers** to enjoy the product at its best, ensuring value for money/quality.		
		P	5. Food manufacturers have been given clear guidance on the use of **best before**/**use by date** on **food labels**, this is **good as** it should ensure a more consistent approach to labelling/helping the consumer make safe use of the food they buy.		
			Negative		
		N	1. Food labels must display a **date mark** to indicate shelf life of a food product, this may be **bad for consumers** as they may experience confusion over expiry dates/particularly best before dates which could lead to a lot of waste.		
		N	2. **Consumers** who do not understand the importance of **use by dates** (found on highly perishable foods) may ignore these in a bid to save money, this is **bad as** it increases the risk of food poisoning.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(e)**		**2 x 1 marks** for **each** explanation linked to Consumer Protection from Unfair Trading Regulations 2008 (CPRs) and the **consumer**. **Consumer Protection** 1. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures that consumers are protected as it makes it an offence for traders to treat **consumers** unfairly by misleading actions/misleading omissions/aggressive practices. 2. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) protects the consumer by banning 31 specific practices that were considered to be unfair to the **consumer**. 3. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) protects the consumer by prohibiting any unfair commercial practice which may deliberately influence a consumer's decision, so the **consumer** knows that the information given is genuine and can therefore make an informed choice. **Misleading Actions** 1. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) protects the consumer from false information about a product/trader so ensuring the **consumer** is not deceived. 2. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) makes it illegal to give misleading information about the characteristics/origin of a product so **consumers** will be reassured that the product is genuine. 3. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) makes it illegal for a trader to give false information about himself such as qualifications/awards so the **consumer** can be reassured that claims are credible.	**2 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(e)**		**(cont)** 4. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) makes it illegal to mislead consumers about the availability of a product (offering only a few items at a particular price with no hope of meeting the demand) therefore **consumers** will know that offers are genuine. 5. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) protects the **consumer** from being misled by preventing the marketing of products in such a way as to confuse it with a competitor's product (similar brand/name/logo). 6. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures that if a company displays a membership logo to a code of practice then they must/be committed to this/follow it so that the **consumer** is not misled when making choices. **Misleading Omissions** 1. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures that traders must give clear information/not ambiguous (labelling on a food product) so that the **consumer** can make informed decisions. 2. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures that sufficient information is given about a product/trader must not be economical with the truth so that **consumers** can make informed choices when purchasing goods and services.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
2	**(e)**		**(cont)** **Aggressive Practices** 1. Consumer Protection from Unfair Trading Regulations 2008 (CPRs)protects the consumer from aggressive sales tactics which **consumers** may find intimidating and cause them to make unwise decisions. 2. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures that traders cannot influence a consumer's decision by applying pressures which may affect the **consumer's** ability to make an informed choice. 3. Consumer Protection from Unfair Trading Regulations 2008 (CPRs) ensures vulnerable **consumers** are not exploited by traders who may try to influence their decision based on their needs so protecting consumers whose judgement may be impaired. Marks can be awarded for specific examples linked to food products showing understanding of CPRs.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)			4 EV	

Fact	Nutritional value of food/meal
Opinion	Good/bad for the athlete
Consequence	Impact on the health/well-being of the athlete (linked to the fact)

4 x 1 mark for **each** valid point of evaluation linked to the nutritional needs of an **athlete**

(Headings have been provided to assist marking but are not required to be provided by the candidate)

Beef Chilli

1 **Positive**

Protein

P 1. The **beef** chilli contains (high biological value) protein from the beef which is **good as** it will allow the **athlete** to grow/repair/maintain body cells during training/competing.

P 2. The **beef** chilli contains (high biological value) protein which is **good** for the **athlete as** it can be used as a secondary source of energy for training/competing.

P 3. The **beef** chilli contains (high biological value) protein which is **good** for the **athlete as** it helps to absorption of calcium/maintain/repair bones whilst training/competing.

P 4. The **beans** found in the chilli would provide a source of (low biological value) protein which is **good as** it will allow the **athlete** to grow/repair/maintain body cells during training/competing.

Fat

P 5. The chilli will contain fat from the **beef** this may be **good** to the **athlete** when training **as** it can provide a concentrated source of energy.

P 6. The chilli will provide the athlete with fat from the **beef** this could be **good as** it will keep them warm whilst training outside.

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)**		
			Iron		
		P	7. The **beef** chilli contains iron which is **good** for the **athlete** whilst training as it is required for the formation/production of red blood cells/reduces the risk of anaemia/tiredness/ exhaustion.		
		P	8. The **beef** chilli contains iron in the more readily absorbed (ferrous)(haem) form **which** is **good** for the **athlete** whilst training **as** this will help prevent anaemia/tired/breathless.		
			Phosphorous		
		P	9. The **beef** chilli contains phosphorous which is **good** as phosphorous combines with calcium to produce calcium phosphate which is essential for the **athlete as** it will help maintain/strengthen their bones.		
			Vitamin B12		
		P	10. The **beef** chilli contains Vitamin B12, this is **good** for the **athlete as** it is required for the formation of red blood cells/reduces the risk of anaemia/tiredness/exhaustion.		
		P	11. The **beef** chilli contains Vitamin B12, this is **good** for the **athlete as** it is required for a healthy nervous system **so** ensuring maximum athletic ability.		
		P	12. The **beef** chilli contains Vitamin B12 which is **good** as it is required to release energy from carbohydrates/sugars/protein **so** ensuring the **athlete** has sufficient energy for training/competing.		
			Vitamins A, C and E		
		P	13. The **tomato** found in the chilli sauce may be rich in vitamin A, this is **good** for the **athlete as** it is required to keep mucous membranes of the eyes/lungs/throat/digestive tract moist/free from infection.		
		P	14. Vitamin A found in the **tomatoes** from chilli is **good** for the **athlete as** it assists with good vision/protects surface tissues.		
		P	15. The **tomato** found in the chilli sauce may be rich in vitamin C which is **good as** this will help absorb iron/anaemia in the **athlete**.		
		P	16. The **tomato** found in the chilli sauce may be rich in vitamin C which is **good as** if the **athlete** injures themselves cuts/wounds will heal quicker.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)**		
		P	17. Vitamin E contained within the **beef** is **good as** helps maintain cell membranes/ antioxidant **therefore** preventing CHD in later life for the **athlete**.		
		P	18. The **tomato** found in the chilli sauce may be rich in vitamin A, C and E which is **good as** it wards off free radicals, it is an anti-oxidant vitamin **so** reducing the **athletes** risk of coronary heart disease (CHD) in later life/certain cancers.		
			NSP/dietary fibre		
		P	19. The **tomato/onion/vegetables** found in the chilli may contain NSP which is **good** for the **athlete** as it will help prevent constipation/ haemorrhoids/bowel disorders so the athlete can participate in sports.		
		P	20. The **tomato/onion/vegetables** found in the chilli sauce may be rich in NSP which is **good** as it provides a feeling of fullness **so** preventing the **athlete** snacking on high fat/sugary foods/reducing risk of obesity.		
			Sodium		
		P	21. The **chilli** may have added **salt** which may be **good** for the **athlete** as it will reduce the risk of muscle cramps/dehydration whilst participating in sports.		
		2	**Beef Chilli** **Negative**		
			Fat		
		N	1. The **chilli** will contain **beef** which is high in saturated fat which is **bad as** it could lead to CHD/obesity in later life for the **athlete**.		
			Sodium		
		N	2. The **chilli** may have added **salt** which may be **bad** for the **athlete** as it may increase their risk of high blood pressure/ hypertension/some cancers/coronary heart disease (CHD) in later life.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)**		
			Baked potato		
		3	**Positive**		
			Carbohydrates		
		P	1. The **baked potato** is high in carbohydrate which is **good** for the **athlete as** it will provide a source of slow release energy whilst training/taking part in sport.		
		P	2. The **baked potato** is high in carbohydrate **therefore** helping the **athlete** to meet the target of increasing Total Complex Carbohydrates by 25%.		
		P	3. **Baked potato** contains no sugar **therefore** helping the **athlete** to meet the dietary target for reduction in NME sugars in children to no more than 10% of total energy/no increase in adults.		
		P	3a. The **baked potato** is high in CHO which is good for the **athlete** as adds bulk/makes them feel fuller for longer so less likely to snack on high sugar/fat food/reducing risk of obesity.		
			NSP		
		P	4. If the skin of the **baked potato** is eaten this will provide NSP which is **good as** it helps prevent constipation/haemorrhoids/bowel disorders **so** the **athlete** can continue to participate in sports.		
		P	5. The skin of the **baked potato** will provide NSP which is **good** as it provides a feeling of fullness **so** preventing the **athlete** snacking on high fat/sugary foods/reducing risk of obesity.		
			Fat		
		P	6. As the **potato** will be baked, it will not have any fat added to it for cooking **therefore** helping the **athlete** to meet the dietary target of reducing fat intake/saturated fat intake to no more than 35%/11% of energy intake per day.		
			Vitamin C		
		P	7. The **baked potato** may be rich in vitamin C which is **good** as this will help absorb iron **so** preventing anaemia in the **athlete**.		
		P	8. The **baked potato** may be rich in vitamin C which is **good as** if the **athlete** injures themselves cuts/wounds will heal quicker/reduce the risk of infection.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)** **Baked potato**		
		3	**Positive**		
		P	9. The **baked potato** will provide a source of vitamin C which is **good** as it wards off free radicals, it is an anti-oxidant vitamin **so** reducing the **athletes** risk of certain cancers/coronary heart disease (CHD) in later life.		
		4	**Negative**		
			Fat		
		N	1. The **athlete** may add **butter** to the **baked potato** which may be **bad as** it will not help meet the dietary target of reducing fat intake/saturated fat intake to no more than 35%/11% of energy intake per day.		
			Rhubarb Crumble		
		5	**Positive**		
			Carbohydrates/Starch		
		P	1. The **crumble** topping may be high in carbohydrates which is **good** providing the **athlete** with slow release energy when training/taking part in sports.		
		P	2. The **crumble** topping might contain cereals such as oats, this is **good as** this may help the athlete reduce LDL cholesterol **so** reducing the risk of coronary heart disease (CHD).		
			Fat		
		P	3. The **rhubarb** is very low in fat which is **good** for the **athlete as** it will help reduce the risk of weight gain/obesity.		
		P	4. As the **rhubarb** is low in fat this is **good as** it will help the **athlete** to meet the dietary target of reducing fat intake/saturated fat intake to no more than 35%/11% of energy intake per day.		
			Protein		
		P	5. The **flour** from the crumble will contain protein which is **good** for the **athlete as** it will be required for the repair/maintenance of muscle/body cells whilst taking part in sports.		
		P	6. The **flour** from the crumble will contain protein which is **good** for the **athlete as** it would help absorb calcium ensuring bones/teeth remain strong whilst training.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)**		
			Vitamins		
		P	7. The **rhubarb** may be rich in vitamin C which is **good as** this will help absorb iron preventing anaemia in the **athlete**.		
		P	8. The **rhubarb** may be rich in vitamin C which is **good as** if the **athlete** injures themselves cuts/wounds will heal quicker/reduce the risk of infection.		
		P	9. The **rhubarb** will provide a rich source of vitamin C which is **good as** it wards off free radicals, it is an anti-oxidant vitamin reducing the **athletes** risk of certain cancers/coronary heart disease (CHD) in later life.		
		P	10. The **butter/margarine** used in the crumble topping will contain vitamin A this is **good** as it is required to keep the mucous membranes moist reducing the **athletes** risk of infections.		
		P	11. The **butter/margarine** used to make the crumble topping will contain vitamin D this is **good as** it will aid the absorption of calcium **so** helping the athlete maintain strong bones/teeth.		
		P	12. The **butter/margarine** used to make the crumble topping will provide a source of fat soluble vitamins (ADEK) this will be **good as** it will help the **athlete** maintain good health.		
			Calcium		
		P	13. The **rhubarb** contains calcium which is **good as** this will help the blood to clot if the **athlete** gets injured.		
		P	14. The **rhubarb** will contain calcium which is **good** for the **athlete as** this will help ensure the correct functioning of his muscles/nerves so help improve **athletic** performance.		
		P	15. The **rhubarb** will provide a source of calcium this is **good as** it will ensure the **athlete** has strong bones and teeth reducing the risk of osteoporosis/osteomalacia.		
			NSP		
		P	16. The **rhubarb/flour** may provide a source of NSP which is **good** as it will help provide a bulk to the diet preventing snacking and therefore reducing the **athlete's** risk of obesity/weight gain.		
		P	17. The **rhubarb/flour** may provide a source of NSP which is **good as** this will help prevent the risk of constipation/bowel disorders in the **athlete**.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)** **Rhubarb crumble**		
		6	**Negative**		
			Carbohydrates/sugar		
		N	1. The **crumble topping** may be high in sugar, this may be **bad** for the **athlete as** it will increase the risk of dental caries/tooth decay/obesity/weight gain.		
			Fat		
		N	2. **Butter** used in the crumble topping may be high in fat which may be **bad as** it will not help the **athlete** meet the dietary target of reducing fat intake/saturated fat intake to no more than 35%/11% of energy intake per day.		
		N	3. **Butter** used in the crumble topping may be high in fat which is **bad as** it may increase the **athletes** risk of weight gain/obesity/ coronary heart disease (CHD).		
			NSP		
		N	4. The **rhubarb crumble** may be high in NSP/phytic acid which may be **bad** for the **athlete** as it may prevent iron being absorbed **therefore** increasing the risk of anaemia.		
		N	5. The **rhubarb crumble** may be high in NSP which may be **bad** for the **athlete** as it may prevent calcium being absorbed **therefore** increasing the risk of osteoporosis/ osteomalacia.		
			Custard		
		7	**Positive**		
			Protein		
		P	1. Milk used within the **custard** contains (High Biological Value) protein which is **good** for the **athlete as** additional protein will be required for maintenance/development of bones/teeth whilst taking part in sports.		
		P	2. Milk used within **custard** contains (High Biological Value) protein which is **good as** it would help repair/maintenance of body tissue whilst the **athlete** is training.		
		P	3. Milk used within the **custard** contains protein/lactose which is **good** for the **athlete as** it could aid the absorption of calcium **which** is necessary for the maintenance/ repair of the bones/teeth.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(a)		**(cont)** **Fat**		
		P	4. Milk used to make **custard** may be low fat, this is **good** for an **athlete as** it helps (to meet Scottish dietary target) to reduce fat intake/saturated fat to no more than 35%/11% of energy per day **therefore** reducing the risk of weight gain/coronary heart disease (CHD) in later life.		
			Vitamins		
		P	5. Milk used to make the **custard** contains vitamin B1 (thiamine) which is **good** for the **athlete as** it helps release energy from carbohydrates preventing tiredness.		
		P	6. Milk used to make the **custard** contains vitamin B1 (thiamine)/vitamin B12 which is **good** for the **athlete as** it is required for the correct functioning of the nervous system/prevents poor co-ordination affecting athletic performance.		
		P	7. Milk used within the **custard** contains vitamin B2 which helps release energy from protein/carbohydrates/fats which is **good** for the **athlete as** it will prevent tiredness/lack of energy whilst training/taking part in sports.		
		P	8. Milk used to make **custard** contains vitamin B12, this is **good** for the **athlete as** it reduces the risk of (pernicious) anaemia.		
			Folic acid		
		P	9. Milk used to make the **custard** contains folic acid **which** is **good** for the **athlete as** it is required for the correct functioning of the nervous system/preventing poor co-ordination which would affect athletic performance.		
		P	10. Milk used to make the **custard** contains folic acid **which** is **good** for the **athlete as** it is required for the formation of red blood cells **therefore** if iron levels are low this will help prevent anaemia.		
			Custard		
		8	**Negative**		
			Carbohydrates		
		N	1. Sugar used within the **custard** will provide a lot of energy which is **bad as** if the **athlete** is not using the energy whilst training/taking part in sports **as** it may lead to weight gain/obesity.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(a)**		**(cont)**		
		N	2. Sugar found in the **custard** is extrinsic sugars which is **bad as** this will increase the **athlete's** risk of dental caries.		
			Fat		
		N	3. Milk used in the **custard** may be high in fat which is bad for the **athlete as** it may contribute to weight gain/higher cholesterol levels and increase the risk of coronary heart disease (CHD).		
		N	4. Milk used in the **custard** may be high in fat which is **bad as** it will not help the **athlete** meet the dietary target of reducing fat intake/saturated fat intake to no more than 35%/11% of energy intake per day.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(b)**		**4 x 1 mark** for **each** correct use of disassembly which links to the **food manufacturer**. 1. Disassembly allows the **food manufacturer** to create a specification for new food products. 2. **Food manufacturers** disassemble food products to stimulate ideas for new designs. 3. **Food manufacturers** disassemble food products to find out how ingredients/ functional properties affect the quality of a product. 4. **Food manufacturers** disassemble food products to help maintain sales by producing a new/improved version. 5. **Food manufacturers** disassemble food products to correct faults that may occur during food manufacturing/modify shape/size. 6. **Food manufacturers** disassemble food products to ensure they remain at their best during storage/assess the product until consumed. 7. Disassembly allows the **food manufacturer** to investigate how proportion/variety of ingredients will affect the nutritional value of the product. 8. Disassembly allows the **food manufacturer** to investigate how proportion/variety of ingredients will affect the cost of the product. 9. Disassembly allows the **food manufacturer** to investigate competitor's products to help develop new ideas/improve current product. 10. Disassembly allows the **food manufacturer** to create a product which meets the preferences/demands of the consumer. 11. Disassembly allows the **food manufacturer** to check that they are meeting the legal requirements of any packaging claims they make. 12. Disassembly allows the **food manufacturer** to investigate packaging to help maintain the quality of product during distribution/storage. 13. Disassembly allows the **food manufacturer** to investigate packaging information therefore identifying the most effective way of informing the consumer.	**4 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(c)**		**4 x 1 mark** for **each** correct explanation of a control measure linked to each stage of the production of a **sandwich** **1 mark** from **each** stage.	**4 KU**	
3	**(c)**	**(i)**	**Delivery of ingredients** 1. Checks should be in one place to ensure that high-risk foods/(**prawns/mayonnaise)** are delivered at temperatures below 5ºC **to** reduce the risk of micro-organisms multiplying/food poisoning. 2. Check the temperature/condition of delivery vehicle **so** ensuring the **sandwich ingredients** are safe to use. 3. Date marks of foods for the **sandwich ingredients** should be checked **to** ensure that there is sufficient time remaining for them to be used safely.		
3	**(c)**	**(ii)**	**Storage of ingredients** 1. **Bread** must be kept in cool dry store/sealed containers **to** prevent moisture affecting the foods causing microbial growth/moulds. 2. **Sandwich ingredients** must be kept covered to prevent contamination from foreign bodies/flies/air-borne bacteria etc. 3. Stock control systems should be used **to** ensure that first in first out (FIFO) system applies with all **sandwich ingredients**. 4. Storage areas must be cleaned regularly **to** prevent microbial growth/dust/food debris contaminating **sandwich ingredients** which could attract pests. 5. Storage areas for the **prawn/mayonnaise** must have regular temperature control/hygiene checks **to** prevent microbial growth. 6. **Sandwich ingredients** must be used by their shelf-life/date marks **to** prevent microbial growth/deterioration of ingredients.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(c)	(ii)	**(cont)** 7. All **sandwich ingredients** must be stored in a temperature-controlled environment to prevent microbial growth. 8. All **sandwich ingredients** should be stored away from chemicals **to** prevent the risk of cross-contamination. 9. Any perishable ingredients/butter/spreads/ prawns/mayonnaise used in **the sandwich** should be stored below 5ºC **to** prevent bacterial growth. 10. The **prawns** should be kept covered during storage **to** prevent other foods being tainted from their smell.		
3	(c)	iii	**Preparation of ingredients** 1. Food handlers should follow strict hygiene guidelines/wear protective clothing/be trained in food safety **to** prevent contamination of the **sandwich ingredients**. 2. Equipment used in manufacture of **sandwich** must be cleaned regularly **to** prevent the risk of contamination from micro-organisms. 3. Preparation areas for the **sandwich** should be subject to regular temperature-control/hygiene checks to prevent contamination from pests/micro-organisms. 4. Ingredients used for **sandwich** must be checked **to** ensure no foreign bodies are present in the prepared foods as these could cause contamination (or cause consumer to choke eg button from clothing). 5. Preparation areas for the **sandwich** should have restricted access **to** prevent contamination. 6. Preparation areas for the **sandwich** should be kept cool **to** prevent micro-organisms multiplying.		
3	(c)	iv	**Packaging** 1. Packaging should be sealed **to** protect **sandwich ingredients** from contamination or physical contamination. 2. The type of packaging should be considered carefully **as** packaging for the **sandwich ingredients (prawns/mayonnaise)** may have to withstand chilling temperatures without breaking up when refrigerated. 3. Packaging for the **sandwich ingredients** should be labelled to indicate how the product should be stored safely before eating **to** prevent the risk of food poisoning.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(d)**			**4 EV**	

Fact	Related to shopping for food online
Opinion	Good/bad/beneficial
Consequence	Impact of fact on shopping/consumer

4x1 mark for **each** valid evaluation linked to purchasing **food online**.

Positive

P

1. When **shopping online** you can research/compare brands/prices of **food** from home which is **good as** it ensures you get the best value for money/more choice.
2. **Shopping** for **food online** can be done at any time of the day/night which is **good as** it is convenient for people who work shifts/with limited time.
3. **Online shopping** for **food** can be carried out in the comfort of your own home/saves travelling **which is good as** it will save time/reduce stress for people who are busy/have families/elderly/ill.
4. **Food** ordered **online** is usually delivered straight to the door which is **good as** it saves time/hassle travelling to the shops.
5. When **shopping** for **food online** convenient delivery times can be selected which can be **good as** it allows people to choose a time that fits in with their work/activities.
6. When **shopping online for food** it helps avoid crowds/queues which is **good as** it reduces stress/saves time when shopping for food.
7. **Shopping online** for **food** can make shopping cheaper/provide internet discounts may be available which is **good as** it saves money/makes consumers feel they are getting value for money.
8. When **buying food online** often shops store your favourite items which is **good as** this can save time finding foods.
9. **Shopping online** for **food** can **be a useful** method of shopping for housebound/disabled/elderly **as** it allows them to choose from a wide range of foods so increasing variety in their diets.
10. When **shopping online** for **food** you are less likely to impulse buy which is **good as** it makes it easier to budget/to save money.

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(d)**		**(cont)** 11. **Online shopping** for **food** can be environmentally friendly/reduces carbon footprint which is **good as** it allows consumers who are concerned about the environment to protect their environment. 12. When **shopping online** for **food** there is less risk of car damage/road accidents which is **good as** it can help save money repairing the car. 13. **Shopping online** for **food** you do not need to use your own fuel which is **good as** it will help protect the environment/save money 14. A wide range of **food** products available **online** which is **good as** it increases consumers choice of food. 15. **Food** ordered **online** can be collected in store (click and collect) which is **good as** it saves consumers time when purchasing food. 16. **Food** ordered **online** can be collected in store (click and collect) which is **good as** it offers flexibility to consumers when shopping for food. 17. **Shopping online for food** can be done on the move/via mobile phones/Ipad which is **good as** this saves time/adds flexibility for consumers. **Negative** 1. When **shopping online** for **food** some foods may not be available when ordered which may be **bad as** additional shopping trips may be needed. 2. When **shopping online** for **food** you cannot see the foods before buying them which may be **bad as** fruit/vegetables may be too large/too small/poor quality/wrong type/ wrong quantity. 3. **Shopping online** for **food** usually carries an additional charge for delivery which can be **bad as** it could increase the cost of the food shop. 4. When **shopping online** for **food** you cannot take advantage of in-store offers/reduced priced foods this is **bad as** you may spend more than you need to/not get value for money. 5. Delivery of **online food shopping** during peak times may be more expensive this may be **bad as** it may reduce your choice of delivery times/increase the cost of your food shop.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(d)**		**(cont)** 6. When **shopping online** for **food** sometimes your first choice may not be available so an alternative may be chosen, this may be **bad as** the alternative selected by the store may not be suitable. 7. When **shopping online** for **food** you cannot check the shelf life of products, this could be **bad as** often foods chosen by the store can have shorter shelf life on products that could be chosen in store. 8. When **shopping online** you cannot assess quality of **foods** which can be **bad as** you may not receive the standard that is needed/wanted. 9. **Shopping** for **food online** is only available for those with internet access/personal computer/mobile phone/tablet/Ipad/higher income families which is **bad as** this may exclude certain groups from accessing online offers. 10. To **shop online** for **food** a credit/debit card is needed which can be **bad as** some consumers are reluctant to use cards on-line due to risk of fraud. 11. **Online shopping** for **food** may not be available to all communities/households this can be **bad as** some consumers will not be able to benefit from exclusive online offers. 12. When **online shopping** for **food** you may make an error this may be **bad as** you may end up with too much/little/wrong food product.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(e)**	**(i)**	**4 x 1 mark** for **each** answer which explains the effect of sugar/liquid on a **baked product** Minimum of **1 mark** to come from **each** ingredient. **Sugar** **Too much** 1. Generally sugar helps the yeast to rise in bread making. 2. Using too much sugar/different types of sugar gives a darker colour in **baked products**. 3. Using too much sugar/different types of sugar gives some **baked products** a sugary texture/gritty texture. 4. Using too much sugar in **baked products** produces very soft mixtures during baking, which will then become hard when cool. 5. Using too much sugar/different types of sugar in **baked products** gives a sweeter result. **Cakes** 6. Using too much sugar when **baking** cakes can cause a hard sugary crust. 7. Using too much sugar when **baking** cakes can cause a coarse-grained product. 8. Using too much sugar when **baking** fruit cakes will result in the fruit sinking. 9. Using too much sugar when **baking** cakes will cause the cake to sink in the middle as the gluten has been over-softened so that it collapses. **Scones** 10. Scones that have too much sugar added will have 'speckled' appearance when **baked**. **Pastry** 11. Pastry that has had too much sugar added will be too sweet/may be a darker colour when baked.	**4 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(e)	(i)	**(cont)** **Too little** 12. A lack of sugar will result in **baked products** having less flavour. 13. A lack of sugar will result in **baked products** with poorer keeping qualities/reduces the shelf life of baked products. 14. A lack of sugar will cause **baked products** to have a paler colour. 15. A lack of sugar in a **baked product** will result in the product not rising so well. **Cakes** 16. When **baking** cakes, if too little is added cakes will not rise as well. **Scones** 17. When **baking** scones, if too little sugar is added the scones will lack flavour. **Pastry** 18. When **baking** pastry, if not enough sugar is added then the pastry will not be sweet enough.		
3	(e)	(ii)	**Liquid** **General** 1. Liquid produces steam in the **baked product** helping it to rise/give it a lighter finish. 2. Liquid works with raising agents in the **baked products** helping it to rise/give it a lighter finish. 3. Liquid is needed in **baking products** for gelatinisation with starch which helps in the setting of the product. 4. Type of liquid used in the **baked product** will affect flavour/texture where milk is used instead of water.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	(e)	(ii)	**(cont)** **Too much** 5. Too much liquid may cause the structure of the **baked product** to collapse resulting in a heavy doughy texture in cakes/the top being cracked in cakes/a coarse open texture in bread/hard tough short crust pastry. 6. Too much liquid may cause the structure of the **baked product** to collapse resulting in fruit sinking/not being held evenly throughout product. 7. Too much liquid may cause the structure of the **baked product** to collapse resulting in the product spreading/losing its shape during cooking. **Cakes** 8. When **baking** cakes, too much liquid can result in a heavy, doughy texture and the top may be cracked. 9. When **baking** fruit cakes, fruit will sink in a fruit cake if the mixture is too wet/the heavy fruit cannot be held evenly throughout. **Scones** 10. Too much liquid when **baking** dough makes it too soft and as a result it spreads and loses shape when cooking. **Pastry** 11. Too much liquid added to pastry when **baking** results in hard and tough short crust pastry. 12. Too much liquid added to bread when **baking** causes dough to be sticky and the bread has a coarse and open texture. **Too little** 13. If there is too little liquid, moisture will be lacking and the **baked product will be dry/hard/tough**. 14. Lack of liquid will mean less steam production and the **baked product** will be heavy/poorly risen.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
3	**(e)**	**(ii)**	**(cont)** **Pastry** 15. A lack of liquid will result in **baked products** such as short crust pastry having a fragile/crumbly texture/flaky pastry will be hard and tough as layers of flakes will not be formed. 16. Liquid is needed so that yeasts can grow/multiply providing volume/giving a well risen **baked product** as in bread **Scones** 17. A lack of liquid when **baking** scones will result in the dough being stiff. 18. A lack of liquid when **baking** scones will result in scones having a heavy texture/poorly risen. **Cake** 19. When **baking** cakes a lack of liquid may cause the cake to have a dry texture.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	**(a)**		**4 x 1 mark** for **each** correct benefit of **breastfeeding** **Benefit for breast feeding to mother** 1. **Breastfeeding** is beneficial as it uses up extra calories which helps the mother to lose excess weight (fat stores) gained during pregnancy. 2. **Breastfeeding** is beneficial as mothers bond more readily with babies establishing a close emotional attachment to the child. 3. Mothers who **breastfeed** benefit as medical evidence suggests they have a lower risk of developing breast cancer/ovarian cancer/reduced risk of osteoporosis after the menopause. 4. **Breastfeeding** can benefit mothers as it saves time as there is no bottles to warm in the middle of the night/no equipment to sterilise/no preparation time required. 5. Mothers who **breastfeed** their babies are able to provide milk immediately (it's always at the correct temperature) which is good if the baby is hungry therefore making it less stressful for baby and mother. 6. **Breastfeeding** is beneficial for mother and baby as it allows for quiet time/allows mother some relaxation in what can be a busy day. 7. **Breastfeeding** can be beneficial as it is more economical as there is no extra equipment/formula milk to buy saving money. 8. Mothers who are concerned about the environment will find it beneficial to **breastfeed** as there are no plastic bottles/formula milk containers/ electric sterilisation. 9. **Breastfeeding** mothers can express milk by use of a breast pump benefiting them as it allows partners/relatives/friends to take over allowing mother time to herself/closer involvement of family.	**4 KU**	

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(a)		**(cont)** **Benefit of breast feeding to baby** 1. **Breast** milk is beneficial as it is germ free allowing the mother to feed the baby without causing stomach upset. 2. **Breast** feeding is beneficial as nutrients are provided in the correct proportion for their growth and development of the baby's body tissue and organs. 3. **Breastfed** babies stop feeding when full which is beneficial as babies will not gain unnecessary weight/may be less likely to be overweight in later life. 4. **Breastfed** babies find it easier to digest milk which is beneficial as there is less chance of nappy rash and stomach upset. 5. **Breastfed** babies are provided with antibodies which is beneficial as they protect babies from bacterial/viral infections (eg gastro intestinal infections/diarrhoea). 6. **Breastfed** babies have an important advantage over bottle fed as they have lower risk of developing asthma/obesity/diabetes/ allergic reactions (eczema)/an increased IQ. 7. **Breastfeeding** can help the baby to bond with the mother which is beneficial as it helps the baby to feel more comforted/secure.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(b)	(i)		4 EV	

Fact	Fact relating to organic/genetically modified foods (GM)
Opinion	Good/bad for the consumer
Consequence	Impact on the consumer (linked to the fact)

4 x 1 mark for **each** valid point of evaluation linked to **organic or genetically modified foods (GM)** and the **consumer**

Organic foods

Positive

P 1. **Organic** food may taste better/better flavour, this is **good** for the **consumers as** they consider they are getting a better quality/more flavoursome product.

P 2. **Organic** food uses fewer fertilisers/chemicals, this is **good** for the **consumer** as they may feel it is more beneficial to health/less likely to cause cancer.

P 3. **Organic** food uses fewer fertilisers/chemicals, this is **good** for the **consumer** as they may feel it is more beneficial to health/less likely to cause allergies.

P 4. **Organic** food uses fewer fertilisers/chemicals, this is **good** for the **consumer** as they may feel it is more beneficial to the environment.

P 5. **Organic** food is becoming more popular with increased competition between retailers, this is **good** for the **consumer as** it ensures competitive pricing.

P 6. **Organic** food is becoming more popular so more products are being developed which is **good as** it means the **consumer** will have a wider choice.

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(b)	(i)	**(cont)**		
		P	7. **Organic** food offers more choice for **consumers** who have strong beliefs therefore **good as** they are helping them to protect the environment.		
		P	8. Studies have shown that **organic** food contains more nutrients than traditional produce this is **good as** they would be beneficial to the **consumers'** health.		
			Negative		
		N	1. **Organic** food tends to be expensive to buy, this is **bad as** they will not appeal/be available to low income **consumers**.		
		N	2. Quality of **organic** food may not be as good/uniform this is **bad as consumers** may find appearance unacceptable/less attractive.		
		N	3. Quality/freshness of **organic** food may not be as good due to the absence of pesticides/preservatives, this is **bad as consumers** may have to purchase them more regularly/waste food.		
		N	4. **Organic** food is not completely free from fertilisers/chemicals, this is **bad as** some risk health of **consumers** is still possible.		
		N	5. The health benefits of **organic** food are still not proven, this is **bad as consumers** may be paying a high price for no valid reason.		
		N	6. Regulation of **organic** food may mislead the **consumer**, this is **bad because** it would be difficult to ensure the ingredients of a food product are all 100% organic.		
		N	7. Due to transportation, some **organic** foods may have a high carbon footprint, this is **bad as consumers** may have concerns over environmental impact/will not purchase them.		
		N	8. Limited range of **organic** foods is **bad** for the **consumers as** it will restrict their food choice.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(b)	(ii)	**Genetically modified foods** **Positive** **P** 1. Vegetarian cheese can be produced with the aid of **genetic modification**, this is **good** for **vegetarians as** it increases their intake of important nutrients. **P** 2. Some fruits and vegetables can be **modified** to contain high levels of the ACE vitamins this is **good** to the **consumer as** they may provide extra protection against CHD/certain cancers. **P** 3. Rice/maize can be **modified** to increase the protein content, this may be **good** to **consumers** in poorer countries **as** it will help prevent malnutrition. **P** 4. Genetically **modified** foods can be modified to produce additional health benefits/low in saturated fat/low in calories/useful source of NSP, this is **good** to **consumers as** it will help them to meet current dietary advice. **P** 5. **Genetic modification** can assist in the preservation of foods by preventing the ripening of fruits/vegetables, this is **good as** they will have a longer shelf life/higher nutritional value **so consumers** will be able to reduce the amount of time they spend shopping. **P** 6. **Genetic modification** can increase the shelf life of fresh foods without the use of preservatives/additives, this is **good** to **consumers** who may suffer from allergies to additives **as** they will be able to gain the nutritional benefit without suffering from allergic reactions. **P** 7. **Genetic modification** can give higher yields/produce foods in greater quantities, this is **good** to the **consumer as** a good supply means a lower/more stable price of food. **P** 8. **Genetic modification** can be used to control crop diseases which is **good** to the **consumer** as it reduces loss in supply of certain foods **so** helps to maintain lower food prices.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(b)	(ii)	**(cont)**		
		P	9. **Genetic modification** allows for efficiencies in food production, this is **good as** it can result in a constant supply of food to meet demand, therefore less waste appealing to environmentally concerned **consumers**/ more stable food prices/cheaper prices to the **consumers**.		
		P	10. **Genetic modification** can increase the variety/texture/appearance of foods, this is **good as** it makes foods more appealing to the consumer/ increases **consumer** choice.		
			Negative		
		N	1. **Genetic modification** is seen by some as an unnatural way of producing foods which is **bad as** the **consumer** is concerned about potential health risks/monitoring of safety standards.		
		N	2. Food labels lack clear information on **genetically modified** ingredients, this is **bad as consumer** may be unsure of the source/origin of the gene **so** cannot make an informed choice.		
		N	3. Some **consumers** may be concerned about the ethical aspects/long-term health effects of **genetically modified** foods, this is **bad as** they may not purchase food resulting in food waste.		
		N	4. **Consumers** may be concerned about the environmental aspects of **genetic modification/genetically modified foods** this is **bad as** they may not purchase the food.		
		N	5. **Genetic modification** of foods may make it difficult for **consumers** to know what they are eating, plants could contain animal genes, this is **bad as** it may cause concerns for those who have dietary restrictions/ religious beliefs.		
		N	6. Due to high cost of research for **genetically modified** foods/informative labelling, higher food prices may result, this is **bad as** foods may only be accessible to those **consumers** who can afford it.		
		N	7. **Genetic modification** could cause allergies in **consumers** due to plant modification, this is **bad as** consumers may find they are now allergic to foods which they could previously eat but now can't **because** they contain a gene from an allergen they have.		
			Minimum of **1 mark** from **each** area.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(c)		**3 x 1 mark** for **each** functional property identified **3 x 1 mark** for **each** detailed explanation linked to eggs Functional property must be identified before mark can be awarded for explanation. Where the functional property is incorporated in the explanation this can be credited.	**6 KU**	
		1	**Aeration** 1. When **egg** whites are whisked they increase in volume as the protein/albumen stretches and traps air bubbles in the foam (meringue/omelette). 2. When **egg** is whisked with sugar a large volume of air is trapped in a honeycomb like mesh (whisked sponge).		
		2	**Coagulation** 1. When the protein/albumen in **egg** is heated it changes from a liquid to a solid state thickening a mixture (eg flan). 2. By adding salt/acid or extra egg to an **egg** mixture a firmer set can be achieved when the protein is heated. 3. By adding sugar to an **egg** mixture a looser set can be achieved when the protein is heated. 4. When **egg** has been used to bind ingredients together (eg burger/biscuit) the egg coagulates on heating holding the ingredients together.		
		3	**Emulsifying** 1. **Egg** yolk allows oil and another liquid to be mixed together without separating (eg mayonnaise). 2. **Egg** yolk stabilises mixtures by forming an emulsion which will prevent curdling (eg cakes).		
		4	**Glazing** 1. **Eggs** can be used to glaze foods (eg pastries) which when heated/baked/cooked in the oven will produce a golden brown colour.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(c)		**(cont)**		
		5	**Binding** 1. **Egg** can be used to bind ingredients together (eg burgers/biscuits) which ensures they stay together when the product is being produced.		
		6	**Colour** 1. **Egg** can improve the appearance of pale foods by giving a rich colour from the egg yolk (eg white sauce). 2. **Eggs** can be used to glaze foods (eg pastries) which when heated/baked/cooked in the oven will produce a golden brown colour.		
		7	**Flavour** 1. **Egg** can impart a rich taste to food products improving the flavour.		
		8	**Coating** 1. Using egg to apply a coating on food products (eg potato croquettes) allows the coating to stick to the product which then coagulate/prevents the food from falling apart while cooking.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(d)			4 EV	

Fact	Fact about fat replacers/functional foods
Opinion	Positive/negative for consumer
Consequence	Impact of the stated fact on/for the consumer

4 x 1 mark for **each** valid point of evaluation linked to fat replacers or functional foods to the **consumer**.

Minimum of one mark from each area.

4	(d)	(i)	**Fat replacers**		
			Positive		
		P	1. Fat replacers will replace the fat source in food products (with a vegetable oil-based product) this is **good** to the **consumer as** it ensures products have a lower fat content/contribute to the dietary target reduce consumption/eat less fat/prevent CHD/obesity/HBP.		
		P	2. Fat replacers have a lower energy value than fats, this is **good** to the **consumer as** they can be used to create healthy option/weight reduction food products.		
		P	3. Fat replacers are free from cholesterol, this is **good** to the **consumer as** foods can be produced for people suffering from heart disease.		
		P	4. Fat replacers can be used to produce cakes/desserts, this is **good** to the **consumer as** they can enjoy food products lower in energy/fat.		
		P	5. Fat replacers can be used to replace fats and oils for frying/baking these are **good** to the **consumer as** they can eat low energy/fat snack food products/crisps/tortilla chips/biscuits.		
		P	6. There are a wide range of different fat replacers, this is **good** to the **consumer as** there is a greater choice of low fat/low calorie food products.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(d)	(i)	**(cont)**		
		P	7. Fat replacer/oatrim can be used to replace large amounts of fat, this is **good** to the **consumer as** it can contribute to a reduction of animal fat in the food industry.		
		P	8. Fat replacer/whirl can be used to replace butter/margarine, this is **good** to the **consumer as** it allows food products that contain these ingredients to be manufactured with less fat.		
		P	9. Fat replacer/dairy-lo/simplesse can be used in a variety of dairy products, this is **good** to the **consumer as** it allows food products to be manufactured with less fat.		
		P	10. Olestra is a fat replacer that has no calorific value, this is **good** to the **consumer as** food products can be produced for those following weight reduction diets.		
		P	11. Whirl is a fat replacer that can be used as a substitute for butter/margarine which is **good as** it can be used to produce vegetarian products giving **consumer** greater choice.		
		P	12. Fat replacers are **good** to the **consumer as** they can be used to produce a variety of rich/creamy/flavoursome foods which may be more appealing.		
			Negative		
		N	1. Using fat replacer Olestra in food production may **not be good** to the **consumer as** it can cause intestinal cramps/anal leakage.		
		N	2. Using fat replacer Olestra in food production may **not be good** to the **consumer as** it reduces the absorption of fat soluble vitamins/vitamin A/D/E/K.		
		N	3. Fat replacers are not produced naturally which may **not appeal** to **consumers** who want to avoid manufactured foods.		
4	(d)	(ii)	**Functional foods**		
			Positive		
		P	1. Functional foods (when taken as part of a balanced diet/healthy lifestyle) have the potential to improve health, this is **good** to **consumers as** it may reduce the risks of diet related diseases.		
		P	2. Functional foods have specific health effects which may be **good** to general health, **therefore consumers** may consider taking the product an advantage to promote well being.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(d)	(ii)	**(cont)**		
		P	3. Functional foods may be **good as** they can be used to provide a specific nutrient (even if they don't like the original product eg oily fish because they disliked the flavour).		
		P	4. Omega 3 fatty acids added to **margarine** may be **good** for **consumers** who do not eat oily fish **as** they provide a valuable source of these fat soluble vitamins.		
		P	5. Functional spreading fat (which contains plant Sterols), would be **good** for **consumers as** it may effectively control blood cholesterol **therefore** lowering risk of CHD.		
		P	6. Many of the probiotic drinks help to fight a wide range of food poisoning bacteria, (including E coli) this is **good as** regular consumption by **consumers** may reduce the risk of food poisoning.		
		P	7. Certain bacteria found in bio yogurts are **good as** they may prevent diarrhoea/aid digestion **which** improves the **consumer's** general health.		
		P	8. Certain bacteria found in bio yogurts are **good as** they reinforce the gut/may reduce certain food allergies, **which** improves the **consumer's** general health.		
		P	9. A wide/increased range of functional foods are now available, this is **good** to **consumers as** they should be able to find a product that suits most consumers' needs/likes.		
		P	10. Functional foods are **good** to **consumers** because they are convenient for today's lifestyle **as** they bring about health benefits more quickly than (would normally be the case) through eating conventionally healthy foods alone.		
		P	11. Functional foods may be **good** to elderly **consumers** who have low food intake/poor appetite **therefore** the functional foods could improve their health/intake of nutrients as provide additional nutrients.		
		P	12. Selecting a functional food spreading fat may be **good** to a **consumer** with a family history of heart disease **as** it may help to control cholesterol.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	(d)	(ii)	**(cont)**		
		P	13. Some functional foods (eg breakfast cereals) may provide a reasonably inexpensive source of additional minerals/vitamins in the diet, this is **good as** could improve nutrient intake of **consumers**.		
			Negative		
		N	1. Larger shops/supermarkets tend to stock the widest range of functional foods, this is **bad because** these products are less accessible to rural **consumers**.		
		N	2. Shops/supermarkets may not stock functional foods this is **bad as consumer** choice is restricted.		
		N	3. Need to purchase the functional foods daily for any long lasting health benefits this is **bad as** it may be an expensive outlay for the **consumer**.		
		N	4. Functional foods need to be eaten in a fairly large quantity/on a long-term basis to effect any improvement on health, this is **bad** for **consumer because** no immediate health improvements may occur.		
		N	5. Some functional foods are more expensive, this is **bad as** it may prevent low income **consumers** from being able to purchase them.		
		N	6. Some functional foods are more expensive than the regular foods, this is **bad because consumers** would be able to get the same beneficial ingredients more cheaply/naturally from a balanced diet.		
		N	7. Some **consumers** may come to over-rely on functional foods for added health benefits, this is **bad as** the **consumer** should learn about dietary advice/consuming foods that could provide the same benefits.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
4	**(e)**		**2x1 mark** for **each** explanation of a way in which the **Sale and Supply of Goods Act 1994** protects the **consumer**. 1. **The Sale and Supply of Goods Act** states that consumers have a reasonable period of time to accept or reject goods which protects the **consumer** from faulty items. 2. **The Sale and Supply of Goods Act** states that items must be fit for the purpose intended which protects the **consumer** from products that will not fulfil their function. 3. **The Sale and Supply of Goods Act** states that items must be of satisfactory quality which protects the **consumer** from being misled about features/quality of the product. 4. **The Sale and Supply of Goods Act** states that items must be of satisfactory quality which protects the **consumer** from items that will not provide value for money/last long. 5. **The Sale and Supply of Goods Act** states that there is a contract of sale between buyer and seller which protects the **consumer** as they will have rights to a refund/replacement if the item does not meet the description. 6. **The Sale and Supply of Goods Act** states that items must fit the description given which protects the **consumer** from products that are not as described. 7. **The Sale and Supply of Goods Act** states items must be of satisfactory quality meaning they must look as described and have the correct finish applied to them protecting the **consumer** from products that do not appear to be of satisfactory quality. 8. **The Sale and Supply of Goods Act** states items must be of satisfactory quality therefore goods should have no defects protecting the **consumer** from goods not made to a high standard.	**2 KU**	

	Context:	**x**	**Health and Food Technology**
Higher Home Economics. Analysis of the 2014 Question Paper			**Fashion and Textile Technology**

Section A

Question	**Resource Management Unit**		**Consumer Studies Unit**		**Course Skills**		**Totals**
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
1	Functions and sources of nutrients	1		0	1	0	1
2	Causes of food poisoning	1		0	1	0	1
3	Functions and sources of water	1		0	1	0	1
4	Food politics	0		1	1	0	1
5	Causes of food poisoning	1		0	1	0	1
6	Prevention of dietary diseases	1		0	1	0	1
7			Food Safety Act 1990	1	1	0	1
Totals		5		2	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	Functional properties of foods	1		0	1	0	1
9	Current dietary targets	2		0	2	0	2
10	Sensory testing	2		0	2	0	2
11		0	Role and responsibilities of Environmental Health Department (EHD)	2	2	0	2
12	Functional properties of food	2		0	2	0	2
13	Market research	2		0	2	0	2
14		0	The impact of technological developments on consumer choice of food	2	0	2	2
Carried forward		5		2	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**	
a)	Use of DRV's: child	6		0	0	6	6
b)	Effect of cooking on nutrients	4		0	4	0	4
c)	Current dietary advice	4		0	0	4	4
d)	Prevention of dietary diseases	6		0	6	0	6
Totals		20		0	10	10	20

	Context:	**x**	**Health and Food Technology**
Higher Home Economics. Analysis of the 2014 Question Paper			**Fashion and Textile Technology**

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	0	6
b)	Sensory testing	5			0	5	5
c)			Factors which influence consumers choice of food	4	4	0	4
d)			Current statutory food labeling Current voluntary food labeling	3	0	3	3
e)			Consumer Protection from Unfair Trading Regulations 2008 (CPRs)	2	2	0	2
Totals		11		9	12	8	20

	Context:	**x**	**Health and Food Technology**
Higher Home Economics. Analysis of the 2014 Question Paper			**Fashion and Textile Technology**

Section B Question 3

Question	**Resource Management Unit**		**Consumer Studies Unit**		**Course Skills**		**Totals**
	Course content	**Mark**	**Course content**	**Mark**	**Knowledge**	**Evaluation**	
a)	The use of DRV's and awareness of needs for: athlete	4		0	0	4	4
b)	Product development strategy	4		0	4	0	4
c)		0	The Food Hygiene (Scotland) Regulations 2006	4	4	0	4
d)		0	Factors which influence consumer choice of food	4	0	4	4
e)	Factors affecting finished products	4		0	4	0	4
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 targets	4		0	4	0	4
b)		0	Food politics	4	0	4	4
c)	Functional properties of food	6		0	6	0	6
d)		0	The impact of technological developments on consumer choice of food	4	0	4	4
e)		0	Sale and Supply of Goods Act 1994	2	2	0	2
Totals		10		10	12	8	20

Context:	**x**	**Health and Food Technology**
Higher Home Economics. Analysis of the 2014 Question Paper		**Fashion and Textile Technology**
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	12	8	20
3	12	8	12	8	20
4	10	10	12	8	20
Totals	55-57	23-25	52	28	
Target range	**50-60 marks**	**20-30 marks**	**50-55 marks**	**25-30 marks**	**80**

[END OF MARKING INSTRUCTIONS]