



2015 Health and Food Technology

Higher

Finalised Marking Instructions

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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 | | <ol style="list-style-type: none"> 1. B complex/B group 2. B1 (thiamine) 3. B2 (riboflavin) 4. B3 (niacin) 5. B6 6. B12 7. Biotin/B7 8. Folic Acid(folate)/B9 9. Pantothenic acid 10. C/ascorbic acid <p>1 mark for correct vitamin.</p> | 1 | |
| 2 | | <ol style="list-style-type: none"> 1. Meat/meat products eg pies, sausages/ sausage rolls, pate 2. Lard 3. Suet 4. Butter 5. Hard margarine 6. Whole milk 7. Cheese 8. Cream 9. Eggs 10. Coconut oil 11. Palm oil 12. Biscuits 13. Pastry products 14. Cakes 15. Pizza 16. Pakora 17. Ice-cream <p>1 mark for correct source. * Any other correct source of saturated fat given.</p> | 1 | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|--|---|----------|---------------------|
| 3 | | <ol style="list-style-type: none"> 1. Ranking test 2. Rating test 3. Paired comparison test 4. Duo-trio test 5. Triangle test 6. Taste threshold test 7. Profiling test 8. Preference 9. Discrimination <p>1 mark for correct test.</p> | 1 | |
| 4 | | <ol style="list-style-type: none"> 1. Exposure to sunlight/UV light 2. Oxidation 3. By leaving food uncovered 4. By storing food in a brightly lit area 5. By storing in water <p>1 mark for correct effect of storage.</p> | 1 | |
| 5 | | <ol style="list-style-type: none"> 1. Name of food 2. List of ingredients 3. Shelf life/Use by date/Best before date 4. Name and address of manufacturer/packer/ EU seller 5. Weight/volume of product 6. Place of origin 7. Storage instructions 8. Instructions for use/cooking instructions 9. Food additives 10. Amount/type of ingredient associated with the food 11. Food allergens 12. Lot number <p>1 mark for correct piece of information</p> | 1 | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|--|--|----------|---------------------|
| 6 | | 1. European Union 1 mark for correct abbreviation. | 1 | |
| 7 | | 1. Wheat 2. Rice 3. Oats 4. Peas 5. Beans 6. Lentils 7. Tofu 8. Textured vegetable protein 9. Soya bean 10. Soya products eg soya milk 11. Nuts 12. Bread 13. Pasta (egg free) 14. Breakfast cereals 15. Quorn (egg free) 1 mark for correct source of protein. * Any other correct source of protein suitable for a vegan. | 1 | |
| 8 | | 1. Extrinsic – not part of the cell structure of plants 2. Extra sugar that is added to the product 3. Not naturally present in a food 1 mark for correct explanation. | 1 | |
| 9 | | 1. Goods must be of a satisfactory quality 2. Goods must fit the description given 3. Goods must be fit for the purpose for which they are intended 4. Consumers have a reasonable time to accept/reject goods if faulty 5. Entitlement to refund/replacement if goods are faulty 2 x 1 mark for each correct area covered. | 2 | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|--|---|----------|---------------------|
| 10 | | <ol style="list-style-type: none"> 1. Adds flavour 2. Adds texture/moisture 3. Adds colour 4. Provides shortness 5. Extends shelf life 6. Helps trap air <p>2 x 1 mark for each correct function.</p> | 2 | |
| 11 | | <ol style="list-style-type: none"> 1. Good intake of calcium 2. Good intake of protein 3. Good intake of Iron 4. Good intake of vitamin C 5. Good intake of NSP/dietary fibre 6. Increased intake of liquids 7. Avoid foods high in fat/saturated fats 8. Reduce energy intake 9. Avoid foods high in sugar 10. Avoid spicy foods 11. Good intake of fruit and veg 12. Reduce salt intake <p>2 x 1 mark for each correct factor.</p> | 2 | |

| Question | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|--|----------|---------------------|
| 12 | <ol style="list-style-type: none"> 1. Provides children with a source of energy 2. Aids concentration in school 3. Total complex carbohydrates give a slow (continual) release of energy 4. Helps prevent snacking/overeating/ encourages healthy diet 5. Keeps blood sugar levels constant 6. Breakfast cereals/cereal bars contain NSP/Dietary fibre 7. Breakfast cereals are usually fortified with vitamins/minerals 8. Provides a warm/safe environment for children 9. Provides an area for children to socialise/mix with their friends 10. May help reduce childcare costs for working parents 11. May reassure parents that their child is safe 12. May save families money 13. Provides children from (low-income families) with breakfast 14. May prevent lateness to school 15. Helps prevent obesity 16. Helps prevent diet related disease (accept example) 17. Helps speed up metabolism 18. Saves busy parents' time 19. Helps to meet the Scottish dietary targets/CDA <p>2 x 1 mark for each correct benefit.</p> | 2 | |

| Question | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|----------|---------------------|
| 13 | <ol style="list-style-type: none"> 1. Giving advice on the nutrient content of foods/dietary issues/healthy eating 2. Providing accurate and meaningful food labelling/issuing leaflets/posters 3. Developing food labelling/labels to give more accurate information to help with safe storage of food/prevent food safety risks/food poisoning outbreaks 4. Monitoring the composition of additives 5. Providing advice/information to the public/government on food matters 6. Representing the UK/public on matters of food safety/standards in the EU/Worldwide 7. Protecting the public with food safety/standards 8. Representing the public/UK on matters of food safety/standards 9. Protecting the consumer against chemical contaminants in food 10. Effective enforcement and monitoring of food related regulations/policies/legislation 11. Licencing of meat processing companies 12. Controlling genetically modified (GM) food for human consumption/animal feedstuff 13. Regulation/sale of natural mineral water/ bottled water/spring water 14. Commission research into food related matters. 15. Licencing/inspection of manufacturers who produce irradiated foods <p>In Scotland:</p> <ol style="list-style-type: none"> 16. Dealing with issues relating to meat/meat products 17. Dealing with issues related to food hygiene 18. Dealing with issues related to novel foods 19. Dealing with issues related to radiological safety 20. Dealing with issues related to food emergencies <p>2 x 1 mark for each correct responsibility</p> | 2 | |

| Question | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|--|----------|---------------------|
| 14 | <p>Advantages</p> <ol style="list-style-type: none"> 1. Provides an increased range of food products 2. TVP/soya increases food choices for vegetarians 3. Provides a wide variety of flavours/shapes/textures to food products 4. Provides the diet with NSP/prevents bowel disorders/constipation 5. Raw materials can be cheap reducing food costs 6. Can be kept for a long time 7. Unpalatable foods (such as soya beans) can be made into nutritious food products 8. Makes starch more digestible/allows glucose to enter the blood stream quicker 9. Can be made without the addition of fats/helping to meet a healthy diet/meet SDT/CDA 10. Makes foods more attractive/appealing 11. Can be fortified <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Some products have been deep fried/high in fat 2. Foods produced by extrusion may be high in salt 3. Expensive products could be produced from cheaper ingredients 4. Encourages dietary diseases (accept examples) 5. May contain additives/addictive 6. Extrusion cooking of high fibre blended flour may increase bacterial fermentation in the colon/may depress appetite <p>1 mark for advantage 1 mark for disadvantage</p> | 2 | |

Section B

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|--|---|----------------|---|-------------|--------------------------|--------------------|--|------|--|
| 1 | (a) | <table border="1"> <tr> <td>Opinion</td> <td>High/low for the nutrient. Good/bad for the person</td> </tr> <tr> <td>Fact</td> <td>Function of the nutrient</td> </tr> <tr> <td>Consequence</td> <td>Impact on health/wellbeing of too much/too little of the nutrient linking the fact to the pregnant woman</td> </tr> </table> <p>6 x 1 mark for each point of evaluation which makes reference to the needs of a pregnant woman/unborn baby.</p> <p>(Headings have been provided to assist marking but are not required to be provided by the candidate).</p> | Opinion | High/low for the nutrient. Good/bad for the person | Fact | Function of the nutrient | Consequence | Impact on health/wellbeing of too much/too little of the nutrient linking the fact to the pregnant woman | 6 EV | |
| Opinion | High/low for the nutrient. Good/bad for the person | | | | | | | | | |
| Fact | Function of the nutrient | | | | | | | | | |
| Consequence | Impact on health/wellbeing of too much/too little of the nutrient linking the fact to the pregnant woman | | | | | | | | | |
| | | <p>Energy (Low)</p> <p>Positive</p> <p>P 1. Energy intake is lower which may be good in the later stages of pregnancy as she may not be as physically active therefore will be less likely to become overweight/obese/baby becoming overweight.</p> <p>P 2. Energy intake is lower which may be good for the pregnant woman as excess weight gain during pregnancy could lead to additional complications therefore this may reduce her risk of hypertension/varicose veins/difficult birth.</p> | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|---|----------|---------------------|
| 1 | a | <p>(cont)</p> <p>Negative</p> <p>N 1. Energy intake is lower which is bad for the pregnant woman as energy is required for all body activity therefore reduced energy levels may leave her feeling tired/lethargic.</p> <p>N 2. Energy intake is lower which is bad for the pregnant woman as extra energy is required in the first months of pregnancy to support the growth of the foetus/to enable fat to be laid down for child birth/breast feeding (after birth) therefore reduced energy levels may result in her being tired/lethargic/ delayed development of the foetus.</p> <p>N 3. Energy intake is lower which is bad for the pregnant woman as extra energy is required in the last few months of pregnancy to support the growth of the foetus/to enable fat to be laid down for child birth/breast feeding therefore reduced energy levels may result in her being tired/lethargic/ delayed development of the foetus.</p> <p>Protein (High)</p> <p>Positive</p> <p>P 1. Protein intake is higher this could be good for the pregnant woman as additional protein is needed for the growth/development of the baby's body cells therefore ensuring correct development of the baby.</p> <p>P 2. Protein intake is higher which may be good for the pregnant woman as it is needed for the growth and maintenance of body tissues during pregnancy therefore will support the changes in her body.</p> <p>P 3. Protein intake is higher this could be good for the pregnant woman as it is needed to aid the absorption of calcium therefore ensuring the correct development of the baby's bones.</p> <p>P 4. Protein intake is higher this could be good for the pregnant woman as it is needed to aid the absorption of calcium therefore reduces the risk of osteoporosis / osteomalacia in later life.</p> <p>P 5. Protein intake is higher this could be good for the pregnant woman as excess protein may be used as a secondary source of energy which she is lacking therefore it may prevent her from becoming tired/lethargic.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|---|----------|---------------------|
| 1 | a | <p>(cont)</p> <p>Negative</p> <p>N 1. Protein intake is higher which may be bad for the pregnant woman as if this was to continue excess protein may be stored in the body as fat therefore could lead to obesity</p> <p>Folate (Low)</p> <p>Negative</p> <p>N 1. Folate intake is lower for the pregnant woman which may be bad as it is required to produce red blood cells when iron is lacking therefore this may increase the woman's/baby's risk of anaemia.</p> <p>N 2. Folate intake is lower for the pregnant woman which may be bad as it is required for the correct growth of the nervous system therefore increasing the baby's risk of being born with neural tube defects/spina bifida.</p> <p>N 3. Folate intake is lower for the pregnant woman which may be bad as it is required for brain development therefore increasing the baby's risk of delays in development.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|---|----------|---------------------|
| 1 | a | <p>(cont)</p> <p>Vitamin A (Low)</p> <p>Positive</p> <p>P 1. Vitamin A intake is lower which may be good for the pregnant woman as excess can be toxic therefore reducing the risk of miscarriage/birth defects.</p> <p>Negative</p> <p>N 1. Vitamin A intake is lower which may be bad for the pregnant woman as it is required for the production of visual purple/good vision in dim light therefore the vision of the pregnant woman/developing baby may be impaired.</p> <p>N 2. Vitamin A intake is lower for the pregnant woman which may be bad as it is required for healthy skin/mucus membranes therefore this may cause skin/mucus membranes to become dry which would increase her risk of infection during her pregnancy.</p> <p>N 3. Vitamin A intake is lower which may be bad for the pregnant woman as it is required to develop resistance to infection therefore reducing her resistance to disease during pregnancy.</p> <p>N 4. Vitamin A intake is lower which may be bad for the pregnant woman as it is an antioxidant therefore may increase her risk of coronary heart disease (CHD) in later life/cancer for the pregnant woman/her baby.</p> <p>Sodium (High)</p> <p>Negative</p> <p>N 1. Sodium intake is higher which may be bad for the pregnant woman as excess sodium can raise blood pressure/hypertension therefore increasing her risk of a stroke / kidney disease/complications in pregnancy / coronary heart disease (CHD) in later life.</p> <p>N 2. Sodium intake is higher which may be bad for the pregnant woman as this may lead to calcium depletion from the bones increasing her risk of osteoporosis/osteomalacia in later life.</p> <p>N 3. Sodium intake is higher which may be bad for the pregnant woman as sodium could lead to imbalance of body fluids therefore increases risk of hypertension/high blood pressure</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|--|----------|---------------------|
| 1 | a | <p>(cont)</p> <p>Iron (High)</p> <p>Positive</p> <p>P 1. Iron intake is higher which may be good for the pregnant woman as it is required for the formation of haemoglobin/red blood cells for the demands of pregnancy/birth therefore reducing her risk of anaemia / tiredness / exhaustion.</p> <p>P 2. Iron intake is higher which may be good for the pregnant woman as it is required for the formation of the haemoglobin/red blood cells therefore she will have enough iron to provide her growing baby with a store of iron.</p> <p>NSP (High)</p> <p>Positive</p> <p>P 1. NSP intake is higher which may be good for the pregnant woman as it assists the removal of waste/toxins from the body therefore reducing her risk of constipation / diverticulitis/bowel cancer / haemorrhoids</p> <p>P 2. NSP intake is higher which may be good for the pregnant woman as in the later stages of pregnancy she may be less active and this will help remove waste/toxins from the body therefore reducing her risk of constipation/bowel disorders/haemorrhoids</p> <p>P 3. NSP intake is higher for the pregnant woman which may be good as they will give her a feeling of fullness/prevent snacking therefore reducing her risk of obesity/weight gain during pregnancy.</p> <p>Negative</p> <p>N 1. NSP intake is higher than recommended which may be bad as this will hinder the absorption of iron/calcium in the diet so increasing the risk of anaemia/osteoporosis/osteomalacia in later life.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|---|----------|---------------------|
| 1 | (b) | <p>4 x 1 mark each correct effect on each nutrient. Minimum of 1 mark to come from each nutrient.</p> <p>(i) Protein</p> <ol style="list-style-type: none"> 1. When heated protein will coagulate/denature/ set. (accept examples) 2. When heating wheat protein/gluten the protein sets so forming the structure of baked products (accept examples). 3. When milk is heated the milk proteins will set forming a skin on the (surface of) milk. 4. Meat/egg proteins will shrink when heated. 5. Heat/normal cooking makes protein more digestible. 6. Overheating leads to a hardening of protein so making it difficult to digest. 7. Overheating leads to a hardening of protein so reducing its nutritive value. 8. Protein becomes less soluble when heated. <p>(ii) Carbohydrate - Starch</p> <p>Moist Heat</p> <ol style="list-style-type: none"> 1. Starch grains first 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. 4. Cooking moist starch makes it more digestible. <p>Dry heat</p> <ol style="list-style-type: none"> 1. Starch changes to dextrin when foods are roasted/baked/toasted. 2. The surface of any baked item changes to dextrin/golden brown colour/black. 3. Dextrinisation caused by dry heat contributes to the colour. 4. Cooking starch with dry heat makes it more digestible. 5. Overheating of starch causes charring / black / damage to its structure/nutritive value to be lost. | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|---|----------|---------------------|
| 1 | (b) | <p>(cont)</p> <p>Carbohydrate – Sugar</p> <p>Moist heat</p> <ol style="list-style-type: none"> 1. Sugar first dissolves then at a high temperature/prolonged heating becomes syrup. 2. Sugar will caramelize/burn. 3. Nutritive value is not lost unless sugar is burnt/becomes inedible. <p>Dry heat</p> <ol style="list-style-type: none"> 1. Sugar first melts, then caramelizes/finally burns. 2. Sugar contributes to the colour of baked items by caramelisation. 3. Dry heat forms a golden brown crust 4. Sugar caramelises so giving a golden brown colour. 5. Overheating of starch causes charring/black/ damage to its structure/nutritive value to be lost. | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|--|---|-------------|--|----------------|----------|--------------------|---------------------------------|------|--|
| 1 | (c) | <table border="1"> <tr> <td>Fact</td> <td>about the contribution of pasta (must be pasta not sauces)</td> </tr> <tr> <td>Opinion</td> <td>good/bad</td> </tr> <tr> <td>Consequence</td> <td>of the fact for the diet/health</td> </tr> </table> <p>4 x 1 mark for each point of evaluation which makes linked to pasta in the diet.</p> <p>Positive</p> <p>P 1. Pasta is a good addition to the diet as it contains complex carbohydrates therefore providing slow release energy.</p> <p>P 2. Pasta is a good addition to the diet as it provides carbohydrates which provide energy for all body activity/active people/people involved in sport.</p> <p>P 3. Pasta is a good addition to the diet as it provides slow release energy so aids concentration/helps control blood sugar.</p> <p>P 4. Pasta is good for diabetics as it contains total complex carbohydrates so helps regulate blood sugar.</p> <p>P 5. Pasta is a good addition to the diet as it helps fill you up therefore you are less likely to snack on high fat/sugar/salty foods/reduces the risk of obesity/high blood pressure / Coronary Heart Disease (CHD).</p> <p>P 6. Pasta is a good addition to the diet as it is low in sugar therefore should not cause excess weight gain/obesity/high blood pressure/Coronary Heart Disease (CHD)/tooth decay/diabetes.</p> <p>P 7. Pasta is a good addition to the diet as it is low fat therefore should not cause weight gain/obesity/high blood pressure/Coronary Heart Disease (CHD).</p> <p>P 8. Pasta is a good addition to the diet because it provides protein for the body therefore allowing growth and repair and maintenance of body cells/secondary source of energy.</p> <p>P 9. Wholemeal pasta plays a good part in the diet as it is a source of NSP which helps to prevent constipation/diverticular disease/bowel cancer/haemorrhoids/piles/bowel disorders/removes waste from the body/fuller for longer/prevents snacking.</p> <p>P 10. Pasta is a good addition to the diet as it is low in sodium therefore reducing the risk of hypertension/stroke/Coronary Heart Disease (CHD).</p> | Fact | about the contribution of pasta (must be pasta not sauces) | Opinion | good/bad | Consequence | of the fact for the diet/health | 4 EV | |
| Fact | about the contribution of pasta (must be pasta not sauces) | | | | | | | | | |
| Opinion | good/bad | | | | | | | | | |
| Consequence | of the fact for the diet/health | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|---|----------|---------------------|
| 1 | (c) | <p>(cont)</p> <p>P 11. Pasta is a good addition to the diet as it may be fortified with folic acid therefore helping reduce the risk of spina bifida/neural tube defects in babies.</p> <p>P 12. Pasta is a good addition to the diet, as it may be fortified with folic acid/help prevent anaemia.</p> <p>P 13. Pasta is a good addition to the diet as it helps meet the dietary target for an increase in total complex carbohydrates so can provide slow releasing energy.</p> <p>P 14. Pasta is a good addition to the diet as it is relatively cheap to buy therefore can provide an inexpensive source of protein / carbohydrate.</p> <p>P 15. Pasta may be good in the diet as it may contain vitamin D therefore may help the development and maintenance of bones and teeth.</p> <p>P 16. Pasta may be good in the diet as it can be made with egg therefore providing protein/fat/iron/phosphorous/Vitamin A/ Vitamin B complex/Vitamin D/Vitamin E.</p> <p>Negative</p> <p>N 1. Pasta may be bad in the diet as it may be cooked with salt therefore increasing the risk of high blood pressure/Coronary Heart Disease (CHD).</p> <p>N 2. Pasta may be bad in the diet as it is low in NSP therefore leading to constipation/ diverticular disease /bowel cancer / haemorrhoids/piles/bowel disorders.</p> <p>N 3. Pasta may be bad in the diet as it may be served with a sauce that is high in fat therefore may contribute to obesity/Coronary Heart Disease (CHD).</p> <p>N 4. Pasta may be a bad option in a healthy diet as it contains carbohydrates and therefore if eaten in excess may contribute to obesity.</p> <p>N 5. Pasta may be bad in the diet if someone suffers from intolerances/Coeliac disease as the pasta may trigger the allergy due to its ingredients.</p> | | |

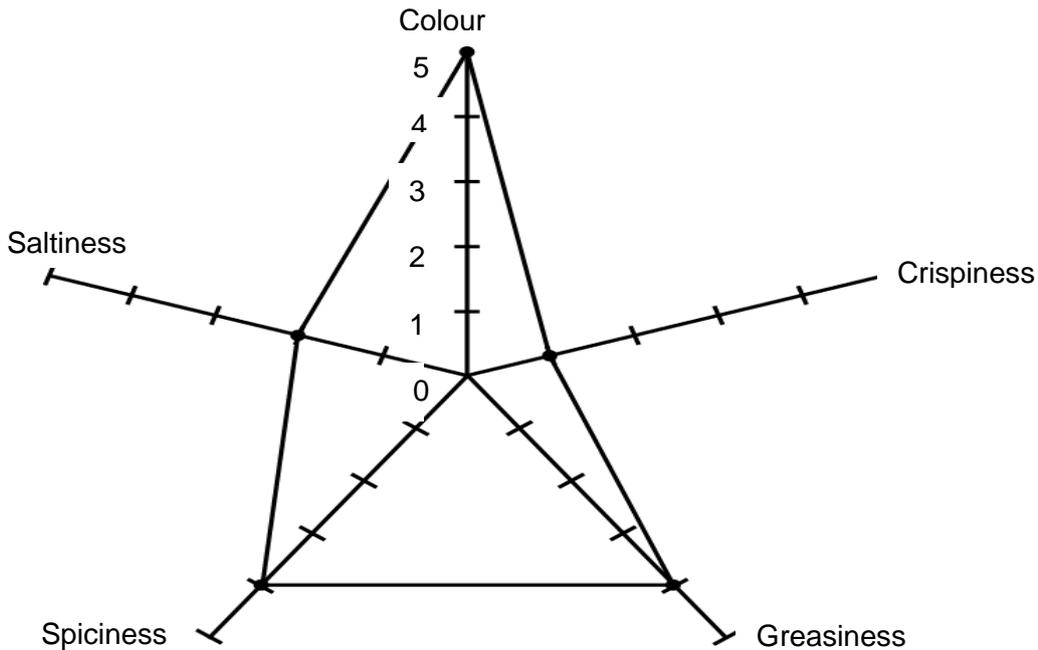
| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|--|----------|---------------------|
| 1 | (d) | <p>3 x 1 mark for each factor 3 x 1 mark for each explanation linked to prevention of osteoporosis/understanding of osteoporosis.</p> <p>Factor must be identified before mark can be awarded for explanation. Where factor is incorporated in the explanation this can be credited.</p> <p>1 Factor – Adequate calcium intake</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. High intake of calcium in childhood/younger life/during the main stages of development, helps to raise peak bone mass/helps to prevent the development of osteoporosis in later life. 2. Calcium is necessary for the formation/maintenance/development of bones/helps achieve peak bone mass/ensures strong bones are developed/helps to prevent weak/brittle bones/osteoporosis. 3. Calcium combines with phosphorous to produce calcium phosphate which is the main substance necessary for bone hardness/strength/helps to achieve peak bone mass/helps to prevent osteoporosis. <p>2 Factor – Adequate Vitamin D intake</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Vitamin D helps the absorption of calcium in the body which helps to achieve peak bone mass/helps prevent osteoporosis. 2. Vitamin D helps the absorption of calcium, which is essential for bone formation which helps prevent osteoporosis. 3. Exposure to sunlight/ultra violet light is essential for the synthesis of Vitamin D needed for calcium absorption for bone formation which helps prevent osteoporosis. | 6 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|--|----------|---------------------|
| 1 | d | <p>(cont)</p> <p>3 Factor – Adequate Phosphorous intake</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Phosphorous combines with calcium to produce calcium phosphate which is (the main substance) necessary for bone hardness/ strength/helps to achieve peak bone mass/ helps to prevent osteoporosis. 2. Phosphorus is necessary for formation/ maintenance/development of bones/helps achieve peak bone mass/ensures strong bones are developed/helps to prevent weak/ brittle bones/osteoporosis. <p>4 Factor – Low fat/saturated fat intake</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Reducing fat/saturated fat may prevent poor calcium absorption which could contribute to osteoporosis. <p>5 Factor – Low sodium/salt</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. This will slow down the loss of calcium from the bones and help to prevent osteoporosis. <p>6 Factor – Low NSP intake</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Low intake of NSP in the diet may mean absorption of calcium is not hindered allowing peak bone mass and preventing osteoporosis. <p>7 Factor – Low phytic acid/low oxalic acid</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Low intake of phytic acid/low oxalic acid could mean absorption of calcium not hindered so allowing peak bone mass and preventing osteoporosis. <p>8 Factor – Include lactose in the diet</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Lactose in the diet could assist absorption of calcium/help achieve peak bone mass and so prevent osteoporosis. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|--|----------|---------------------|
| 1 | d | <p>(cont)</p> <p>9 Factor – Include protein in the diet</p> <p>Explanation</p> <p>1. Protein in the diet could assist absorption of calcium help achieve peak bone mass and so prevent osteoporosis.</p> <p>10 Factor – A healthy body weight</p> <p>Explanation</p> <p>1. By maintaining a healthy body weight no excess strain will be placed on bones helping to prevent osteoporosis.</p> <p>11 Factor – Low intake of processed foods</p> <p>Explanation</p> <p>1. Processed foods tend to be lacking in calcium (so don't enable peak bone mass to develop) so minimising the quantity consumed will reduce the risk of osteoporosis.</p> <p>2. Limiting processed foods which tend to be high in fat/saturated fat helps prevent osteoporosis as the absorption of calcium is not hindered.</p> <p>12 Factor – Low intake of carbonated drinks</p> <p>Explanation</p> <p>1. Low intake of carbonated drinks may prevent erosion of bone mass so helping prevent osteoporosis.</p> <p>13 Factor – Low alcohol intake</p> <p>Explanation</p> <p>1. Low intake may mean less toxic to bone cells/less reduction of bone mass so preventing osteoporosis.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|--|------------|---------------------|
| 2 | (a) | <p>4 x 1 mark for each explanation linked to each stage of development and the new pizza.</p> <p>(i) Stage – Concept Generation</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. This is when the company will develop ideas for the pizza. 2. This is the thinking stage/thinking up new ideas for the pizza. 3. The development of ideas from market research, for a pizza. 4. Disassembly of a popular existing pizza can establish why certain characteristics are popular/assists manufacturers in creating pizza. 5. The pizza has to be new so this stage ensures manufacturers do not replicate other pizzas. 6. The cost/portion size/methods of cooking and reheating/flavour/texture/appearance of the pizza can be considered. <p>(ii) Stage – Prototype production</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. The prototype/example/sample pizza is developed. 2. The prototype/example/sample pizza is measured against the specification. 3. The prototype/example/sample pizza 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 pizza. 5. The production run for the pizza is tested so the processes can be checked. | 4KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|-----|--|----------|---------------------|
| 2 | (a) | <p>(cont)</p> <p>(iii) Stage – Product testing</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. A range of pizzas are tested by target market/various ages/tasting panels so that opinions can be obtained. 2. Sensory testing of the pizza allows for refining/improvements/modifications of the recipe as a result of consumer opinion. 3. A final prototype of the pizza is trialled. <p>(iv) Stage – Launch</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. The budget available will affect how to promote/market the pizza. 2. Food exhibitions/store launch/press release may be selected as the most suitable method to launch the pizza. 3. Range of promotional techniques may be used to promote the sale of the pizza (in-store tasting/special offers money off coupons/television advertisements). 4. Important stage of the development process as the pizza is now on sale/launched on the market place. 5. Piloting of the pizza may be carried out to gauge the success of the product/monitor sales initially. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|---|---|-------------|---|----------------|-------------------|--------------------|--|------|--|
| 2 | b | <table border="1"> <tr> <td>Fact</td> <td>Show an understanding of the rating from the profile (high/low)</td> </tr> <tr> <td>Opinion</td> <td>Positive/negative</td> </tr> <tr> <td>Consequence</td> <td>Of the rating for the teenager/how impacts on teenager</td> </tr> </table> <p>4 x 1 mark for each valid evaluation point linked to the suitability of the pizza for the teenager.</p>  <p>1 Colour (very high/5)</p> <p>Positive</p> <p>P 1. The rating for colour of the pizza is very high indicating it has very good colour making it good for teenagers as they may be more attracted to the colourful toppings</p> <p>P 2. The rating for colour of the pizza is very high indicating there may be lots of vegetables / fruit toppings making it good for teenagers as this will help contribute to the dietary target of increase consumption of fruit and vegetables.</p> | Fact | Show an understanding of the rating from the profile (high/low) | Opinion | Positive/negative | Consequence | Of the rating for the teenager/how impacts on teenager | 4 EV | |
| Fact | Show an understanding of the rating from the profile (high/low) | | | | | | | | | |
| Opinion | Positive/negative | | | | | | | | | |
| Consequence | Of the rating for the teenager/how impacts on teenager | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|---|----------|---------------------|
| 2 | b | <p>(cont)</p> <p>Negative</p> <p>N 1. The rating for colour of the pizza is very high indicating it may be bad for teenagers as it suggests artificial colourings may have been used which may irritate asthma/eczema/hyperactivity/allergies.</p> <p>N 2. The rating for colour of the pizza is very high which may be bad as this may indicate it has lots of fruit/vegetable toppings therefore teenagers who do not like fruit/vegetables may be unwilling to try it.</p> <p>Spiciness (high/4)</p> <p>Positive</p> <p>P 1. The rating for spiciness of the pizza is high showing that it has a strong flavour therefore this may be good for teenagers who enjoy highly flavoured foods.</p> <p>Negative</p> <p>N 1. The rating for spiciness of the pizza is high showing that it has a spicy flavour this may be bad for teenagers as this could give them an upset stomach.</p> <p>N 2. The rating for spiciness of the pizza is high which may be bad as teenagers who do not like strong/spicy flavours so may not try the pizza.</p> <p>Crispness (very low/1)</p> <p>Positive</p> <p>P 1. The rating for crispness of the pizza is very low which is good as it may show it has a deep pan base therefore could be more filling for teenagers.</p> <p>P 2. The rating for crispness of the pizza is very low which may be good for teenagers as some may have braces therefore this may make it easier to eat.</p> <p>P 3. The rating for crispness of the pizza is very low which may be good for the teenager as it indicates the base is not crumbly therefore less mess when eating.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | b | <p>(cont)</p> <p>Negative</p> <p>N 1. The rating for crispness of the pizza is very low which may be bad for teenagers as it may indicate that the base is undercooked/soft therefore could be unappealing.</p> <p>N 2. The rating for crispness of the pizza is very low which may be bad for teenagers as they may prefer a thin/crispy base so may not purchase/repurchase.</p> <p>Greasiness (high/4)</p> <p>Positive</p> <p>P 1. The rating for greasiness of the pizza has been rated high for greasiness which is good as it may indicate that the topping has lots of cheese/meats so may be more appealing to teenagers.</p> <p>Negative</p> <p>N 1. The rating for greasiness of the pizza has been rated high which is bad as it may indicate that the topping has lots of high fat foods/cheese/meats which may increase the teenagers risk of obesity/coronary heart disease (CHD).</p> <p>N 2. The rating for greasiness of the pizza has been rated high indicating high fat/which may be bad for teenagers as it may indicate that it will be messy to eat with fingers/hands/look unappealing.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | b | <p>(cont)</p> <p>Saltiness (low/2)</p> <p>Positive</p> <p>P 1. The rating for saltiness of the pizza has been rated low indicating low salt level which may be good for teenagers as it may reduce the risk of developing hypertension/stroke/Coronary Heart Disease (CHD) in later life.</p> <p>P 2. The rating for saltiness of the pizza has been rated low indicating low salt level which is good for teenagers as it will help to meet the current dietary target/advice for salt.</p> <p>P 3. The rating for saltiness of the pizza has been rated low which is good for teenagers as this would indicate that flavourings have come from spices therefore helping to meet the current dietary target/advice for salt.</p> <p>P 4. The rating for saltiness of the pizza has been rated low which is good for teenagers as too much salt can remove calcium from the bones therefore reducing their risk of osteoporosis/osteomalacia.</p> <p>P 5. The rating for saltiness of the pizza has been rated low which is good for teenagers as it may indicate that the cheese is low in salt therefore helping to meet the current dietary target/advice for salt.</p> <p>Negative</p> <p>N 1. The rating for saltiness of the pizza has been rated low which may be bad for the teenager as they may be used to highly salted foods and therefore may not enjoy the pizza.</p> <p>N 2. The rating for saltiness of the pizza has been rated low which may be bad for the teenager as they may be tempted to add salt to the pizza so increasing their intake of salt.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | c | <p>2 x 1 mark for each explanation linked to food manufacturers and encouraging consumption of fruit.</p> <p>2 x 1 mark for each explanation linked to food manufacturers and encouraging the reduction of salt.</p> <p>(i) Increasing fruit intake</p> <ol style="list-style-type: none"> 1. Food manufacturers are increasing prepared/pre-packed fruit in supermarket so consumers are more likely to eat them/purchase them. 2. Food manufacturers are increasing the variety of snack pack fruit for children so encourages consumers/children to eat more without mess/preparation. 3. Food manufacturers are using fruit in healthy-option dishes/desserts so it makes it easier for consumers to eat more/include in the diet. 4. Food manufacturers are increasing fruit by adding dried fruit to many breakfast cereals so consumers may eat more indirectly increasing consumption. 5. Food manufacturers are producing fruit smoothies so encouraging consumers to increase consumption with no effort/preparation. 6. Food manufacturers are providing useful labelling showing portions of fruit consumed in the dish/food so consumers can easily see how much fruit they are eating. 7. Food manufacturers are providing recipes/serving suggestions for fruit dishes so gives consumers new ways to eat them/increase variety. 8. Food manufacturers are providing frozen fruit so lasts longer for the consumer. | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | c | <p>(cont)</p> <p>(ii) Reducing salt intake</p> <ol style="list-style-type: none"> 1. Food manufacturers are gradually using less/reducing the amount of sodium in the processing of foods so that consumers get used to the reduction of sodium (accept examples). 2. Food manufacturers are using salt alternatives/Lo Salt/natural flavourings to flavour food to reduce the amount of sodium required so ensuring products still have flavour. 3. Food manufacturers are using herbs/spices to flavour food to reduce the amount of sodium required so ensuring products have flavour. 4. Food manufacturers are packing foods in mineral water/sunflower oil rather than brine so reducing the amount of sodium in the product. 5. Food manufacturers are increasing the range of ready meals with less sodium in them giving consumers increased choice of reduced salt products. 6. Food manufacturers are increasing the range of lower salt products so giving consumers increased choice. 7. Food manufacturers are making use of traffic light labelling on packaging to help consumers identify foods which are low/medium/high in sodium. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|---|---|----------------|--------------------------------|-------------|---------------------------------|--------------------|---|------|--|
| 2 | d | <table border="1"> <tr> <td>Opinion</td> <td>Positive/negative for consumer</td> </tr> <tr> <td>Fact</td> <td>Fact about freezing/hydroponics</td> </tr> <tr> <td>Consequence</td> <td>Impact of the stated fact on/for the consumer</td> </tr> </table> <p>4 x 1 mark for each point of evaluation of freezing/hydroponics linked to the consumer.</p> <p>Minimum of 1 mark from each development. (Headings have been provided to assist marking but are not required to be provided by the candidate).</p> <p>(i) Freezing</p> <p>Positive</p> <p>P 1. A wide range of foods can be frozen which is good as consumers now have a wider choice of frozen produce.</p> <p>P 2. The quality of frozen food may be higher because the food is frozen while in peak condition which is good because the consumer may receive a better quality product/more nutritious product.</p> <p>P 3. The majority of consumers have a freezer in their home this is good as it allows them to buy/store frozen foods in advance.</p> <p>P 4. The majority of consumers have a microwave in their home this is good as it allows consumers to easily defrost/reheat frozen food quickly/easily.</p> <p>P 5. Many frozen foods can be cooked straight from the freezer this is good as it makes cooking more convenient to the consumer/ saves time as no need to defrost in advance.</p> <p>P 6. There is little/no loss of nutrients by the freezing process this is good for the consumer as it allows them to make healthier food choices/more nutritious food choices.</p> <p>P 7. Consumers can freeze foods they have in their home/gardens this is good as there will be less waste as food can be stored for longer.</p> | Opinion | Positive/negative for consumer | Fact | Fact about freezing/hydroponics | Consequence | Impact of the stated fact on/for the consumer | 4 EV | |
| Opinion | Positive/negative for consumer | | | | | | | | | |
| Fact | Fact about freezing/hydroponics | | | | | | | | | |
| Consequence | Impact of the stated fact on/for the consumer | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | d | <p>(cont)</p> <p>P 8. Consumers can cook larger quantities of food at the one time and then freeze in portions this is good as saving time for working families (with less time to cook).</p> <p>P 9. Fruit/vegetables can be successfully frozen this is good for the consumer as it will help them to meet the dietary target to increase consumption of fruit and vegetables to 400g a day.</p> <p>P 10. Fruit/vegetables can be successfully frozen this is good for the consumer as it will allow them to have a variety to be used in cooking and reduce waste of buying fresh fruit/vegetables/save money.</p> <p>P 11. Frozen fruit/vegetables tend to have a higher nutrient content than fresh fruit/vegetables as they have been frozen within hours of harvesting this is good for the consumer as they will get more nutrients when eating them.</p> <p>P 12. Frozen products are often less expensive to buy due to efficient mass production this is good for the consumer as they will save money.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|--|----------|---------------------|
| 2 | d | <p>(cont)</p> <p>Negative</p> <p>N 1. Frozen ready meals may be high in fat/sugar/salt/low in NSP this is bad for the consumer as they may contribute to coronary heart disease/obesity/tooth decay/hypertension/diverticulitis.</p> <p>N 2. Foods which are to be frozen need to be packaged/wrapped correctly this is bad for consumers as if food is not protected it could suffer from freezer burn/not acceptable for environmentally conscious consumer.</p> <p>N 3. Consumers who have a large freezer may lose/forget what food is stored this is bad as they may waste food/eat food out with its best before date.</p> <p>N 4. Some foods change texture/appearance in the freezer this is bad for the consumer as they may not be able to use the food the way they had intended (eg hard cheese difficult to slice).</p> <p>N 5. Certain foods don't freeze well this is bad for the consumer as they may not be able to use the food when it is defrosted resulting in waste.</p> <p>N 6. Foods with a high water content don't freeze well this is bad for the consumer as the food will not look the same as when it was fresh.</p> <p>N 7. Overcooking of frozen vegetable can result in nutrient loss this is bad for the consumer as they may not consume the nutrients they expected to.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | d (ii) | <p>(cont)</p> <p>Hydroponics</p> <p>Positive</p> <p>P 1. Hydroponics enables food to be grown in areas where soil/water/weather conditions are poor which is good for the consumer as it will enable consumers to have access to foods that might not otherwise be available.</p> <p>P 2. Hydroponics cuts out the problem of soil-borne disease which is good for the consumer as it reduces the risk of disease in plants so stabilising food costs for the consumer.</p> <p>P 3. In hydroponics disease-control chemicals can be added to the solution which is good because it provides plant food which can be of good quality/disease resistant.</p> <p>P 4. Using hydroponics, growers can expect much higher yields which is good as it can increase availability so reducing the cost of food products for the consumer.</p> <p>P 5. Hydroponics allows large scale production which is good for consumers as it increases the yield so reducing the costs to consumers.</p> <p>P 6. Hydroponics extends the growing season which is good as it could give greater choice to consumers.</p> <p>P 7. In hydroponics the addition of nutrients in the growing solution is good because it produces a better quality product.</p> <p>Negatives</p> <p>N 1. Very few products in the UK are grown using hydroponics which is bad as it limits consumer choice.</p> <p>N 2. The equipment required for commercial hydroponics is expensive which is bad as food products produced in this way are less likely to be produced locally so less likely to be available to environmentally concerned consumers.</p> <p>N 3. Due to the expense of the process, costs would have to be passed onto the consumer which is bad as products will be more expensive.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | e | <p>4x1 marks for each explanation linked to</p> <p>(i) Environmental Health Department or (ii) Trading Standards Department</p> <p>Minimum of one mark from each area.</p> <p>(i) Environmental Health Department</p> <ol style="list-style-type: none"> 1. The Environmental Health Department are responsible for employing Environmental Health Officers who protect consumers against food poisoning. 2. Environmental Health Department officers are responsible for enforcing the Food Safety Act 1990 so protecting the consumer against the risk of food poisoning. 3. Officers from the Environmental Health Department are responsible for regularly inspecting food manufacturers/retailers/ catering outlets without warning so ensuring consumers are protected against the risk of food poisoning. 4. Inspectors from the Environmental Health Department can enter food premises, take away food samples to be tested/condemn foods/make videos to record what they see ensuring the public's health is protected. 5. Officers from the Environmental Health Department can issue an improvement notice to food premises (which specify the contravention, the improvement required and the time allowed to make the improvement) so ensuring public health is protected. | 4KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 2 | e | <p>(cont)</p> <p>6. Officers from the Environmental Health Department can serve an emergency prohibition notice closing premises immediately/banning use of equipment/processes if the department feels there is an imminent risk/injury to the consumers health.</p> <p>7. The Environmental Health Department officers work closely with schools/community organisations providing education on local environment/public health/food safety issues.</p> <p>8. Educational role of the Environmental Health Department is very useful in protecting the interest of the consumers as it raises awareness of the function of the Environmental Health Department.</p> <p>9. Officers from the Environmental Health Department are responsible for food safety/pollution/pest control by investigating complaints made from the general public.</p> <p>10. The Environmental Health Department are responsible for protecting the interests of the consumer by employing officers who deal with pollution control (eg air quality).</p> <p>11. The Environmental Health Department are responsible for protecting the interests of the consumer by employing officers who deal with pest control (eg infestation of vermin).</p> <p>12. The Environmental Health Department are responsible for protecting the interests of the consumer by employing officers who deal with local environment (eg rubbish collection).</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|--|----------|---------------------|
| 2 | e | <p>(cont)</p> <p>(ii) Trading Standards Department</p> <ol style="list-style-type: none"> 1. The Trading Standards Department promotes a fair market in consumer goods/ services/foods protecting the consumer from unfair traders/trading practices. 2. The Trading Standards Department is responsible for ensuring that all foods are sold in metric weights protecting the consumer as they are able to compare food products. 3. The Trading Standards Department enforce The Consumer Protection from Unfair Trading Regulations 2008 they make sure that consumers are not sold products/ services aggressively. 4. The Trading Standards Department enforce The Consumer Protection from Unfair Trading Regulations 2008 this protects the consumer as they are protected from traders who falsely describe/mislead the consumer about the foods/services they are selling. 5. The Trading Standards Department enforce The Food Safety Act 1990 where it deals with labelling of food they can take legal action/court proceedings against people guilty of offences, protecting the consumer against unlawful traders/goods. 6. The Trading Standards Department enforce The Food Safety Act 1990 by taking samples of food ensuring the consumer is purchasing food of the correct composition. 7. The Trading Standards Department enforce The Food Safety Act 1990 any trader found guilty of offences under this Act may be prosecuted. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | a | <p>2x1 mark for each identification of mechanical method.</p> <p>2x1 mark for each explanation linked to the method of introducing air into a baked product.</p> <p>Mechanical method must be identified before mark can be awarded. If mechanical method is identified within explanation of introducing air mark can be awarded.</p> <p>1 Mechanical method: Sieving</p> <p>Explanation</p> <p>1. When sieving air becomes trapped between the particles of flour/sugar/cornflour helping to make a lighter baked product.</p> <p>2 Mechanical method: Creaming/beating</p> <p>Explanation</p> <p>1. Air is trapped in the baked product when fat and sugar are beaten together to form a foam making the mixture lighter.</p> <p>2. Air is trapped in the fat/sugar creamed/ beaten mixture in tiny bubbles which makes the baked product lighter.</p> <p>3 Mechanical method: Rubbing in</p> <p>Explanation</p> <p>1. When making a baked product fat is rubbed into the flour and coats the particles trapping air.</p> <p>2. Air is trapped when the mixture of a baked product is lifted/rubbed in with the fingertips.</p> <p>4 Mechanical method: Whisking</p> <p>Explanation</p> <p>1. When egg white is whisked air bubbles are trapped in foam increasing the volume of a baked product.</p> <p>2. When whisking (egg) the protein (albumin) is stretched, trapping air bubbles making a lighter baked product.</p> <p>3. When (egg) is whisked with (sugar), a large volume of air is trapped resulting in a lighter baked product.</p> | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | a | <p>(cont)</p> <p>5 Mechanical method: Folding</p> <p>Explanation</p> <p>1. When rolling and folding dough, air is trapped between the layers making a lighter baked product.</p> <p>6 Mechanical method: Kneading</p> <p>Explanation</p> <p>1. When kneading dough, small pockets of air are trapped so making a lighter baked product.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|--|---|-------------|------------------------------------|----------------|--------------------------|--------------------|--|------|--|
| 3 | b | <table border="1"> <tr> <td>Fact</td> <td>Nutritional value of the food/meal</td> </tr> <tr> <td>Opinion</td> <td>Good/bad for the elderly</td> </tr> <tr> <td>Consequence</td> <td>Impact on the health/wellbeing of the elderly (linked to the fact)</td> </tr> </table> <p>4 x 1 mark for each valid point of evaluation linked to the dietary needs of the elderly.</p> <p>Chicken curry</p> <p>Positive</p> <p>P 1. Chicken is a good source of protein which is good for the elderly as it would help with repair and maintenance of body cells/helps maintain body tissue.</p> <p>P 2. Chicken will contain protein which will be good for the elderly as excess protein can be used as a source of energy for daily activities.</p> <p>P 3. Chicken will contain protein which is good for the elderly who may be prone to falls as this will allow them to repair tissue they have damaged.</p> <p>P 4. Chicken is low in fat which will be good for the elderly as this will help to reduce fat intake so preventing obesity/coronary heart disease.</p> <p>P 5. Protein contained in the chicken may be good for the elderly as it could aid the absorption of calcium to help prevent osteoporosis.</p> <p>P 6. The chicken curry may contain calcium which will be good for the elderly so they don't suffer from osteoporosis/osteomalacia.</p> <p>P 7. Phosphorous found in the chicken curry will be good for the elderly as it will help with the maintenance of bones/teeth which may be getting weaker/prevent dental caries.</p> <p>P 8. The chicken curry may be low in fat/saturated fat which will be good for the elderly as this will help to prevent narrowing of the arteries/preventing onset of coronary heart disease/obesity.</p> <p>P 9. The curry seasoning in the chicken curry may mean it is low in salt which is good for the elderly as this will reduced the risk of hypertension/high blood pressure/strokes/coronary heart disease.</p> | Fact | Nutritional value of the food/meal | Opinion | Good/bad for the elderly | Consequence | Impact on the health/wellbeing of the elderly (linked to the fact) | 4 EV | |
| Fact | Nutritional value of the food/meal | | | | | | | | | |
| Opinion | Good/bad for the elderly | | | | | | | | | |
| Consequence | Impact on the health/wellbeing of the elderly (linked to the fact) | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | b | <p>(cont)</p> <p>Negative</p> <p>N 1. The chicken curry may be high in saturated fat which will be bad for the elderly as a high intake of saturated fat may contribute to obesity/coronary heart disease.</p> <p>N 2. The chicken curry may be seasoned with salt which may be bad for the elderly as this may contribute to a high blood pressure/coronary heart disease.</p> <p>N 3. The chicken curry may have a lack of NSP contained within the dish this is bad for the elderly as this will not help to prevent constipation/haemorrhoids/bowel disorders.</p> <p>Brown Rice</p> <p>Positive</p> <p>P 1. Brown rice contains carbohydrate (in the form of starch) which may be good for the elderly as it provides the body with energy for activities.</p> <p>P 2. The high starch/complex carbohydrate found in the brown rice is good as energy is released slowly so preventing snacking on high sugar/fat foods therefore reducing the risk of weight gain/obesity for the elderly.</p> <p>P 3. The high NSP content from the brown rice is good as NSP could help to reduce cholesterol, therefore decreasing the risk of coronary heart disease for the elderly.</p> <p>P 4. Brown rice contains carbohydrate this is good as some elderly people are active therefore this will prevent them feeling tired/weak.</p> <p>P 5. The high NSP content from the brown rice is good as it prevents constipation/haemorrhoids/bowel disorders (which can be bad for some elderly people).</p> <p>P 6. Thiamine (Vitamin B1) & Niacin (Vitamin B3) contained within the brown rice is good for the elderly as it will allow for the release of energy from carbohydrates so allowing them to carry out daily activities.</p> <p>P 7. Vitamin B1 (thiamine) found in the brown rice is good for the elderly as it will help maintain movement/muscle tone/prevent strains.</p> <p>P 8. Brown rice contains Vitamin B1 this is good for the elderly as it will ensure correct functioning of the nervous system/maintain reflexes/memory.</p> <p>P 9. Folic acid contained within the brown rice is good for the elderly as it is required for the correct functioning of the nervous system/maintaining good co-ordination/motor skills.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | b | <p>(cont)</p> <p>P 10. Folic acid contained within the brown rice is good for the elderly as it is required for the formation of red blood cells helping to prevent anaemia.</p> <p>P 11. Brown rice is a source of protein which is good for the elderly as it would help with repair and maintenance of body cells.</p> <p>P 12. Brown rice will contain protein which is good for the elderly as excess protein can be used as a source of energy for daily activities.</p> <p>P 13. Brown rice will contain protein which is good for the elderly who may be prone to falls as this will allow them to repair tissue they may have damaged.</p> <p>P 14. Protein contained in the brown rice may be good for the elderly as it could aid the absorption of calcium to help prevent osteoporosis.</p> <p>P 15. The brown rice contains calcium which will be good for the elderly so they don't suffer from osteoporosis/osteomalacia.</p> <p>P 16. Iron contained within the brown rice is good for the elderly as it is required for the formation/production of red blood cells helping to prevent anaemia.</p> <p>P 17. Brown rice is good for the elderly as it contains folic acid which is needed for the formation to red blood cells reducing the risk of tiredness/exhaustion/breathlessness.</p> <p>P 18. Brown rice contains total complex carbohydrate this may be good as energy is released slowly so preventing snacking/high sugar/high fat foods helping to control body weight/obesity in the elderly.</p> <p>P 19. Brown rice contains total complex carbohydrate this may be good for the elderly as it reduces the risk of coronary heart disease/obesity.</p> <p>Negative</p> <p>N 1. The brown rice may have salt added during cooking this is bad for the elderly as this may contribute to a high blood pressure/coronary heart disease.</p> <p>N 2. Brown rice will contain phytic acid which may be bad for the elderly as it may bind the iron from the meal therefore increasing the risk of anaemia.</p> <p>N 3. Brown rice will contain phytic acid which may not be good for the elderly as it may prevent calcium being absorbed resulting in brittle bones/osteoporosis.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | b | <p>(cont)</p> <p>Lemon sponge pudding</p> <p>Positive</p> <p>P 1. The lemon sponge pudding contains carbohydrate (in the form of starch and sugar) this is good for the elderly as it provides the body with energy for activities.</p> <p>P 2. Phosphorous found in the lemon sponge pudding will be good for the elderly as it will help with the maintenance of bones/teeth which may be getting weaker.</p> <p>P 3. Lemons within the lemon sponge pudding will contain a rich source of vitamin C this is good for the elderly as it may help them to absorb the maximum amount of iron from foods so preventing anaemia.</p> <p>P 4. The lemons within the lemon sponge pudding will contain vitamin C this is good for the elderly as vitamin C will help to bind connective tissue allowing injuries to heal quicker.</p> <p>P 5. The lemon sponge pudding will contain fat, which is good for the elderly as it will provide a source of fat soluble vitamins A D E and K.</p> <p>P 6. The lemon sponge pudding will contain antioxidant vitamins, A C and E which will be good for the elderly as this will help to decrease the risk of suffering from coronary heart disease/cancers.</p> <p>P 7. Egg/flour used within the lemon sponge pudding will contain protein which is good for the elderly as it would help with repair and maintenance of body cells.</p> <p>P 8. Egg/flour used within the lemon sponge pudding will contain protein which will be good for the elderly as excess protein can be used as a source of energy for daily activities.</p> <p>P 9. Egg/margarine used within the lemon sponge pudding will contain vitamin A which is particularly good for the elderly as their eyesight can deteriorate with age so helping assist vision in dim light.</p> <p>P 10. Egg/margarine in lemon sponge pudding will contain vitamin A which is good for the elderly as their immune system may be weaker so helping prevent infections in the eyes/lungs/throat and digestive tract.</p> <p>P 11. Egg/flour used within the lemon sponge pudding will contain iron which is good for the elderly as it is required for the formation/production of red blood cells helping to prevent anaemia.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | b | <p>(cont)</p> <p>P 12. The egg/flour contained within the lemon sponge pudding will contain calcium which will be good for the elderly so they don't suffer from osteoporosis/osteomalacia.</p> <p>P 13. Egg/margarine/butter within the lemon sponge pudding will contain vitamin D this is good for the elderly as vitamin D is required to aid the absorption of calcium/phosphorous ensuring the maintenance of bone/teeth structure.</p> <p>P 14. Egg used within the lemon sponge pudding contains vitamin B1 which is good for the elderly as it will allow for the release of energy from carbohydrates so allowing them to carry out daily activities.</p> <p>P 15. Vitamin B1 (thiamine) found in the flour/eggs of of the lemon sponge pudding is good for the elderly as it will help maintain movement/muscle tone/prevent strains.</p> <p>P 16. The egg/flour within the lemon sponge pudding contains vitamin B1 this will be good for the elderly as it will ensure correct functioning of the nervous system/maintain reflexes/memory.</p> <p>Negative</p> <p>N 1. Sugar/margarine/butter used within the lemon sponge pudding will provide energy which is bad as some elderly (people can be less active with age) therefore leading to weight gain/obesity.</p> <p>N 2. Margarine/butter used in the lemon sponge pudding will be high in saturated fat which is bad for the elderly as it may contribute to higher cholesterol levels therefore increase the risk of coronary heart disease.</p> <p>N 3. Sugar used in the lemon sponge pudding may be bad for the elderly as this could cause tooth decay and weaken teeth that may already be deteriorating with age.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|---------------------------------------|--|-------------|---------------------------------------|----------------|----------|--------------------|------------------------------|------|--|
| 3 | c | <table border="1"> <tr> <td>Fact</td> <td>How the factor influences food choice</td> </tr> <tr> <td>Opinion</td> <td>Good/bad</td> </tr> <tr> <td>Consequence</td> <td>Of the fact for the consumer</td> </tr> </table> <p>4 x 1 mark for each evaluation linked to each factor influencing food choice.</p> <p>1 mark should come from each area.</p> <p>(i) Shift patterns</p> <p>Positive</p> <p>P 1. Health conscious consumers working shift patterns may have less time to prepare foods at home but may still opt for healthier convenience foods such as soups/salad tubs/ prepared fruit pots which is good as they will provide important vitamins/minerals/be low in fat (therefore helping to prevent obesity).</p> <p>P 2. Consumers working shift patterns may spend time preparing fresh foods in bulk to then store in the freezer/take to work with them which would be good as this would prevent them from opting for take away foods/ready meals/ restaurant visits which are often high in fat/salt.</p> <p>Negative</p> <p>N 1. Consumers working shift patterns may have less time to prepare foods, so may be more likely to buy ready meals/takeaways which is bad as these tend to contain high amounts of fat/salt/sugar.</p> <p>N 2. Consumers working shift patterns may choose to take ready meals with them (to heat at work) this is bad as ready meals may contain higher amounts of salt/sugar/fat than freshly prepared foods.</p> <p>N 3. Consumers working shift patterns may have irregular working hours. This is bad as they may be more likely to consume readymade meals when they return home from work.</p> | Fact | How the factor influences food choice | Opinion | Good/bad | Consequence | Of the fact for the consumer | 4 EV | |
| Fact | How the factor influences food choice | | | | | | | | | |
| Opinion | Good/bad | | | | | | | | | |
| Consequence | Of the fact for the consumer | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | c | <p>(cont)</p> <p>(ii) Peer pressure</p> <p>Positive</p> <p>P 1. Consumers may be influenced by peer pressure to select foods that their friends are choosing, which is good as this will encourage them to select new foods that they may not have previously considered.</p> <p>P 2. More consumers may visit a variety of restaurants recommended by their peer group which is good as this would widen the tastes/choice of food enjoyed by them.</p> <p>P 3. Due to peer pressure some consumers may go through food fads/special diets which may be good as they may feel part of the group (if their friends are also going through the same change in diet).</p> <p>Negative</p> <p>N 1. Consumers may feel pressurised by peer pressure due to the need to fit in/be socially accepted which may be bad as they may be eating foods they do not enjoy.</p> <p>N 2. Influences from peer groups may determine where consumer's food is purchased/eaten which may be bad as consumers may be forced to eat food from takeaways.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | c | <p>(cont)</p> <p>(iii) TV advertising</p> <p>Positive</p> <p>P 1. Reduced television advertising may lessen the exposure of high fat/sugar/salt foods to children which is good as it is preventing parents being pressurised by their children into buying the products.</p> <p>P 2. Adverts on the television show consumers what food products are available which may be good as they might find out about a new food product which could be beneficial to their health/widen food choice.</p> <p>P 3. Adverts on the television show consumers what food products are available which may be good as they might find out about food deals/ promotions which could save money.</p> <p>P 4. Adverts for food on the television often give factual information which may be good as it could educate the consumer about food products.</p> <p>P 5. The Food Standards Agency produce factual adverts for television (traffic light/saturated fat) which is good for the consumer as it gives them (unbiased) information on which to make food choices.</p> <p>P 6. TV adverts often use a jingle/personality/ celebrity to promote a food product which may be good as it will catch the consumers imagination and they may remember it, so will be more likely to purchase it.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | c | <p>(cont)</p> <p>Negative</p> <p>N 1. Adverts for food on the television may be for foods high in sugar/fat/salt which may be bad as this may encourage people to choose these foods which may result in obesity/ hypertension/ heart disease in later life.</p> <p>N 2. Adverts for food on television are shown at times when the main target group will be watching which could be bad as it may make people choose foods they would not normally buy/promote unhealthy food choices.</p> <p>N 3. Many food adverts on television are endorsed by celebrities which could be bad as the image it promotes could mislead the consumer therefore promoting unhealthy food choices.</p> <p>N 4. Adverts for food on the television often give factual information which may be bad as often not all the facts are given and the consumer may be misled as to the benefit of a food product which they have purchased.</p> <p>N 5. Fruit and vegetables tend not to be advertised this is bad because if they were promoted this could encourage consumers to make healthier food choices.</p> <p>(iv) Money off coupons</p> <p>Positive</p> <p>P 1. Money off coupons are found on packaging/ magazines/newspaper/internet this is good as it will save the consumer money/encourage choice of new foods.</p> <p>P 2. Money off coupons on packaging/magazines/ newspaper/internet may be issued for healthy foods which is good as it may help to prevent diet related diseases.</p> <p>P 3. Money off coupons may encourage consumers to make a repeat purchase of food this is good as it will save them money buying a food they know they will like.</p> <p>P 4. Money off coupons from loyalty card schemes are good as they may encourage consumers to make repeat purchases of foods they enjoy.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | c | <p>(cont)</p> <p>Negative</p> <p>N 1. When money off coupons end the consumer may be unwilling/unable to purchase food at normal/increased price this is bad as this limits their food choice.</p> <p>N 2. The consumer may feel embarrassment at using the money off coupon and opt not to choose the food product this is bad as they will not save any money.</p> <p>N 3. Consumers may choose food they have a money off coupon for however the coupon may have a limited life span this is bad as they will not make the saving they thought.</p> <p>N 4. Consumers may choose/buy food they have a money off coupon for. This is bad as they may not want/need the product /encourage poor food choice.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | d | <p>(i) Emulsifiers (ii) Colourings</p> <p>4 x 1 mark for each explanation of emulsifiers/colourings linked to the consumer.</p> <p>At least one mark from each area.</p> <p>(i) Emulsifiers</p> <ol style="list-style-type: none"> Emulsifiers allow fats and oils to mix with water to make low-fat spreads/salad dressings/mayonnaise so this gives consumers on a weight reducing diet increased choice. Emulsifiers allow fats and oils to mix with water this is good as it improves the appearance of low fat spreads/salad dressings/mayonnaise for consumers. Emulsifiers give food a smooth/creamy texture, so will improve the mouth feel/ acceptability of the end product for consumers. Emulsifiers help mix ingredients together which would normally separate, therefore ensuring the consumers purchase a good end product. Emulsifiers help to improve the shelf life of baked goods for consumers as there will be less wastage/products can be stored for a longer period of time. Lecithin (found in eggs) is a natural emulsifier used for mayonnaise/low fat spreads which may appeal to consumers who wish to avoid artificial ingredients. <p>(ii) Colourings</p> <ol style="list-style-type: none"> During processing food the natural colour is often lost so the use of food colouring helps to improve the appearance/making to more attractive to the consumer. Food colourings can enhance the colour of certain foods making them more attractive to the consumer. Food colourings can be used to ensure colour is maintained during storage/processing of products so that the consumer gets the expected colour. The consumer often prefers uniformity of colour in products so food colourings are sometimes added to mask variations in colour in a product. Consumers can have increased choice as food colourings can be added to give a novelty product eg green tomato sauce. | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | e | <p>Possible sources of Bacillus Cereus: Herbs, lentils, beans, soil and dust, spices, vegetables, dairy products, eggs, cereals, rice and cornflour, cornflour sauces, milk puddings and cooked rice dishes, soup, meat/vegetable dishes.</p> <p>Control measure must be identified before mark can be awarded for explanation. Where the control measure is incorporated in the explanation, this can be credited.</p> <p>2 x 1 mark for each identification of control measure 2 x 1 mark for each explanation of the way the control measure prevents contamination from food sources of Bacillus Cereus.</p> <p>1 Control measure Bacillus Cereus: High standards of kitchen hygiene.</p> <p>Explanation (should include a food source of Bacillus cereus)</p> <ol style="list-style-type: none"> 1. Check cereal dust is removed particularly from storage/preparation areas to avoid contamination by Bacillus Cereus. 2. Check all rice/pasta/dried pulses are rinsed thoroughly before use to avoid contamination by Bacillus Cereus. 3. All equipment/surfaces must be cleaned where vegetables have been washed/prepared to prevent contamination from soil/Bacillus Cereus. <p>2 Control measure Bacillus Cereus: Correct storage of food.</p> <p>Explanation (should include a food source of Bacillus cereus)</p> <ol style="list-style-type: none"> 1. Vegetables should be stored separately from other foods to prevent the risk of contamination of Bacillus Cereus (from soil) to other foods. 2. Herbs/spices/cereals/pasta should be stored in sealed containers/away from other foods to prevent contamination from Bacillus Cereus. 3. Dairy products should be stored in refrigerator below (5°C) so that bacterial growth is slowed reducing the risk of contamination from Bacillus Cereus. | 4 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 3 | e | <p>(cont)</p> <p>3 Control measure Bacillus Cereus: Avoid eating/using unwashed food.</p> <p>Explanation (should include a food source of Bacillus cereus)</p> <ol style="list-style-type: none"> 1. Ensure vegetables are thoroughly washed prior to use to prevent contamination of Bacillus Cereus from soil to other foods. 2. Ensure fruit is washed thoroughly (prior to consumption) as dust may have settled during storage/display in supermarkets so reducing the risk of Bacillus Cereus. 3. Check all rice/pasta/dried pulses are rinsed thoroughly before use to avoid contamination by Bacillus Cereus. <p>4 Control measure Bacillus Cereus: Avoid preparing food in advance.</p> <p>Explanation (should include a food source of Bacillus cereus)</p> <ol style="list-style-type: none"> 1. Avoid preparing rice in advance because if the rice is left in a warm kitchen, Bacillus Cereus will multiply as the rice will be within the danger zone (5-63°C) 2. Cool rice immediately after cooking/ refrigerate to prevent the multiplication of Bacillus Cereus in rice dishes 3. Cook smaller amounts of rice to avoid the need to store it so preventing contamination from Bacillus Cereus <p>5 Control measure Bacillus Cereus: Avoid reheating food.</p> <p>Explanation (should include a food source of Bacillus cereus)</p> <ol style="list-style-type: none"> 1. Avoid reheating rice/reheat thoroughly/serve at once to prevent the multiplication of Bacillus Cereus. 2. Throw out cooked rice after 24 hours to reduce the risk of Bacillus Cereus multiplying and contaminating rice dishes. 3. Reheating thoroughly during flash-frying fried rice to destroy Bacillus Cereus in rice dishes. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | a | <p>3 x 1 mark for identification of factor 3 x 1 mark for each explanation of how the factors other than diet contribute to coronary heart disease</p> <p>Factor must be identified before mark can be awarded for explanation. Where the factor is incorporated in the explanation , this can be credited</p> <p>1 Factor: Smoking</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Smoking causes the blood to thicken, increasing the tendency to clot and contributes to coronary heart disease. 2. Smoking constricts (narrows) the arteries, reducing the blood flow to the heart contributing to coronary heart disease. 3. The nicotine in tobacco smoke increases the pulse rate and raises blood pressure which can contribute to coronary heart disease. 4. The carbon monoxide content of cigarette smoke cuts down the oxygen in the blood so the heart has to work harder causing coronary heart disease. 5. Smoking introduces harmful free radicals into the body/destroys antioxidant vitamins, which could then lead to a build-up of cholesterol in the arteries and causes coronary heart disease. <p>2 Factor: Heredity</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Genetic body conditions may produce high blood cholesterol levels contributing to coronary heart disease. 2. Some families may inherit risk factors and this increases the risk of coronary heart disease. | 6 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | a | <p>(cont)</p> <p>3 Factor: Lack of physical exercise</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Lack of physical exercise may cause energy intake to exceed energy output increasing the risk of obesity and coronary heart diseases. 2. A sedentary lifestyle from an early age contributes to overweight/obesity and therefore coronary heart disease. 3. The heart muscle can be strengthened by exercise so a lack of exercise can contribute to development of coronary heart disease. 4. Blood cholesterol/stress levels can be lowered by exercise so a lack of exercise can contribute to development of coronary heart disease. <p>4 Factor: Stress</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. People who are tense/impatient/anxious may be more likely to suffer from coronary heart disease. 2. Stress can increase blood pressure which increases the risk of coronary heart disease. <p>5 Factor: Gender</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. More men than women tend to have coronary heart disease. 2. Women under 40 years may be protected from coronary heart disease by the hormone oestrogen. 3. After the menopause, when oestrogen levels are reduced cholesterol levels rise and the risk of coronary heart disease increases. <p>6 Factor: Hypertension</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Hypertension can contribute to coronary heart disease as when blood is forced through arteries at high pressure it is more likely to damage artery walls. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | a | <p>(cont)</p> <p>7 Factor: Drugs Prescription/non-prescription drugs</p> <p>Evaluation</p> <ol style="list-style-type: none"> 1. People who consumer drugs may find that their blood pressure increases which could contribute to coronary heart disease. 2. Drugs when consumed can increase heart rate and contribute to coronary heart disease. <p>8 Factor: Lifestyle/increased social drinking alcohol</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. Due to lifestyle, people may consume larger amounts of alcohol at the weekends/ weekdays which can contribute to an increased blood pressure/obesity and contribute to coronary heart disease. | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
|--------------------|--|--|-------------|--|----------------|----------------------------|--------------------|---|------|--|
| 4 | b | <table border="1"> <tr> <td>Fact</td> <td>Fact relating to nutritional/environmental information</td> </tr> <tr> <td>Opinion</td> <td>Good/bad/useful/not useful</td> </tr> <tr> <td>Consequence</td> <td>Impact on the consumer (linked to the fact)</td> </tr> </table> <p>4 x 1 mark for each valid point of evaluation linked to nutritional or environmental information.</p> <p>Minimum of one mark from each area</p> <p>(i) Nutritional information</p> <p>Positive</p> <p>P 1. Many food labels show nutritional information which can be good for the consumer as it enables them to make healthier choices when buying food products.</p> <p>P 2. Food products that display nutritional information can be good as the consumer is able to compare nutritional information between like products and therefore make an informed choice.</p> <p>P 3. Consumers tend to be interested in specific nutrients therefore if nutritional information on a food product makes a claim (low in fat) the manufacturer has to clearly support this which is good as the consumer is protected from false claims.</p> <p>P 4. Nutritional information on labels may state the percentage of sugar/starch which is good for the consumer who wants to reduce sugar therefore helping diabetics/consumers wishing to avoid tooth decay/weight gain.</p> <p>P 5. Nutritional information on labels which give percentages of salt/sodium is good for the consumer who may be on a low salt diet because it allows comparisons between products so helping to reduce the risk of high blood pressure/kidney disease.</p> | Fact | Fact relating to nutritional/environmental information | Opinion | Good/bad/useful/not useful | Consequence | Impact on the consumer (linked to the fact) | 4 EV | |
| Fact | Fact relating to nutritional/environmental information | | | | | | | | | |
| Opinion | Good/bad/useful/not useful | | | | | | | | | |
| Consequence | Impact on the consumer (linked to the fact) | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | b | <p>(cont)</p> <p>P 6. Nutritional information for dietary fibre/NSP is given as a percentage/weight which is good for the consumer who wishes to follow current dietary advice so helping reduce the risk of bowel disorders/heart disease (reducing blood cholesterol).</p> <p>P 7. Some consumers may have special dietary requirements; nutritional information found on food products can be good as it will help them to choose a product to suit their dietary needs.</p> <p>P 8. Nutritional information for fats is often stated on food products as a percentage of saturates/unsaturated/polyunsaturated which could be good for a consumer who wants to reduce his/her intake of saturated fats therefore reducing his/her risk of coronary heart disease.</p> <p>P 9. Nutritional information which gives energy values would be good for the consumer who wants to make comparisons between similar products therefore allowing consumers to make an informed choice/reduce risk of weight gain/obesity.</p> <p>P 10. Nutritional information on food products can be displayed as high/medium/low which is good as it is easier to understand and therefore easier for the consumer to make a comparison and choose the best product for their needs.</p> <p>P 11. Nutritional information is often shown per serving on food products which is good as it is easier for the consumer to understand/compare therefore helping them to make a healthy food choice.</p> <p>P 12. Nutritional information may include a full list of vitamins/minerals which is good as it will allow consumers to make informed choices.</p> <p>P 13. E.U. standardisation of front of pack/colour coded labelling will come into force in December 2014 which is good as this may be a quick and easy way for consumers reading nutritional information and therefore selecting healthier food choices.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | b | <p>(cont)</p> <p>Negative</p> <p>N 1. Nutritional information on food products may not be easily understood by some consumers which is bad as it will not assist them to make healthy choices.</p> <p>N 2. Nutritional information on some food products may be too complicated for the average consumer to understand which is bad because they may choose to ignore it.</p> <p>N 3. Nutritional information displayed in tables on food products may be too small/difficult to read which is bad as it is of little use to the consumer when making healthy choices.</p> <p>N 4. Food manufacturers do not have to provide nutritional information which can be bad for the consumer as they may not be able to compare products/make healthy/informed choices.</p> <p>N 5. Nutritional information for sodium will be found on food products and this may be bad as consumers may not be aware that this is known as salt and so this may not help them control their intake.</p> <p>N 6. Nutritional information may be displayed as a colour coded chart which may be bad as the consumer may find these difficult to understand so may not help them to make healthy/informed choices.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | b | <p>(cont)</p> <p>(ii) Environmental information</p> <p>Positive</p> <p>P 1. Recycling/disposable symbols on food labels are good as consumer may be environmentally conscious therefore more likely to purchase product.</p> <p>P 2. Recycling (symbol) on food label is good for the consumer as it informs them that the packaging has been made from recycled (materials) therefore this may encourage choice as the product is more environmentally friendly.</p> <p>P 3. Recycling symbol on food label is useful to the consumer as it informs them that glass/ aluminium/cardboard/plastic packaging materials can be recycled which may encourage choice as product is more environmentally friendly.</p> <p>P 4. Recycling symbols on food labels is useful to the consumer if they have local Authority green/blue bins as it makes it easier for them to recycle.</p> <p>P 5. Recycling symbols can be shown on biodegradable fruit/vegetable trays, which is useful to the consumer as it makes it easy for them to recycle for composting.</p> <p>Negative</p> <p>N 1. Recycling symbol on food labels may not be useful to the consumer if they have a lack of understanding/lack of knowledge/how to read them which may mean that they do not recycle the product, therefore it will not benefit the environment.</p> <p>N 2. Recycling symbol on food labels may not be useful to the consumer as they may not have access to recycling facilities in the accommodation they live in therefore they will not recycle the product which would be damaging to the environment.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | c | <p>3 x 1 mark for identification of reason. 3 x 1 mark for each explanation linked to each reason explaining why sensory testing of food is carried out by food manufacturers.</p> <p>Reason must be identified before mark can be awarded for explanation. Where the reason is incorporated in the explanation, this can be credited.</p> <p>1 Reason: To assess product acceptability</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. A food manufacturer developing a new product would use sensory testing to decide about its acceptability to consumers/get an idea of potential success/make them profits. 2. A food manufacturer would use sensory testing to assess its acceptability to consumers so they could gain opinion on which sensory attributes were liked/disliked by consumers (eg aroma, taste, appearance and texture). 3. By assessing acceptability of a product through sensory testing, the food manufacturer could then assess which aspects of their product may require changes to be made. <p>2 Reason: To compare products</p> <p>Explanation</p> <ol style="list-style-type: none"> 1. A food manufacturer could use sensory testing to investigate why one product in their range is more popular than another. 2. A food manufacturer could use sensory testing to compare a product they are developing against that of a competitor. 3. A food manufacturer could use sensory testing to establish whether or not the sensory qualities affect sales figures; and the effect of other factors, such as image, advertising or packaging. | 6 KU | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | c | <p>(cont)</p> <p>3 Reason: To assess the shelf life</p> <p>Explanation</p> <p>1. Sensory testing can be used by food manufacturers to assess the shelf life/how the eating quality is affected by testing the product at various lengths of time after production.</p> <p>4 Reason: To carry out quality control</p> <p>Explanation</p> <p>1. Sensory testing can be used by food manufacturers to carry out quality control/ ensuring a consistent standard across different batches of the product/compare against the original specification.</p> <p>5 Reason: To monitor prototypes</p> <p>Explanation</p> <p>1. A food manufacturer could use sensory testing to monitor prototypes, checking that the specifications/improvements have been met.</p> <p>6 Reason: To assess changes made to product</p> <p>Explanation</p> <p>1. A food manufacturer could use sensory testing to find out if changes to existing products, (eg reducing salt content) are noticeably affecting the eating quality.</p> <p>7 Reason: To investigate product popularity/drop in sales</p> <p>Explanation</p> <p>1. A food manufacturer could use sensory testing to investigate why a food product has a sudden drop in sales/gain opinion on the testers product</p> <p>8 Reason: To assess/consider the costing of the product</p> <p>Explanation</p> <p>1. Sensory testing can be used by food manufacturers to reduce costs by trying to change the price of the product without affecting the taste.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance | | | | | | |
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| 4 | d | <table border="1"> <tr> <td>Fact</td> <td>Fact relating to sweeteners/Fairtrade foods</td> </tr> <tr> <td>Opinion</td> <td>Good/bad</td> </tr> <tr> <td>Consequence</td> <td>Impact on the consumer (linked to the fact)</td> </tr> </table> <p>4 x 1 mark for each valid point of evaluation linked to sweeteners or Fairtrade and the consumer</p> <p>Minimum of one mark from each area</p> <p>(i) Sweeteners</p> <p>Positive</p> <p>P 1. Sweeteners sweeten a product without adding excessive calories this is good as the product allows consumers the sweet taste of food without the extra calories.</p> <p>P 2. Sweeteners in food products have little/no energy value this is good because it can aid consumers who are interested in weight reduction.</p> <p>P 3. Sweeteners can be used in confectionery/bakery goods/many other foods to provide a range of healthy options this is good as it increases the range of products available to consumers.</p> <p>P 4. Sweeteners in food products can reduce the sugar content this is good because it can assist consumers with weight reduction/to meet the dietary target for reducing sugar consumption/reduce tooth decay/obesity.</p> <p>P 5. Sweeteners are marketed as a way of allowing sugar consumption/calorie intake to be reduced this is good as the product may be more attractive to consumers following a reduced calorie diet.</p> <p>P 6. Bulk sweeteners do not require insulin to be metabolised this is good as they can be used in products suitable for diabetics (eg jam/ jellies) increasing the food choice for diabetic consumers.</p> | Fact | Fact relating to sweeteners/Fairtrade foods | Opinion | Good/bad | Consequence | Impact on the consumer (linked to the fact) | 4 EV | |
| Fact | Fact relating to sweeteners/Fairtrade foods | | | | | | | | | |
| Opinion | Good/bad | | | | | | | | | |
| Consequence | Impact on the consumer (linked to the fact) | | | | | | | | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
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| 4 | d | <p>(cont)</p> <p>P 7. Bulk sweeteners can be used in sugar free confectionery this is good as it may help reduce the risk of tooth decay/obesity for consumers.</p> <p>P 8. Intense sweeteners are weight for weight sweeter than normal sugar this is good as they will be economical to use by food manufacturers keeping costs low for consumers.</p> <p>Negative</p> <p>N 1. Consumption of sweeteners does not educate the palate this is bad as it will not encourage consumers to change their eating habits.</p> <p>N 2. Some sweeteners do not have the same functional properties as sugar this is bad as consumers' recipes would have to be adapted.</p> <p>N 3. Some sweeteners (eg Acesulfame) do not provide bulk like standard sugar this is bad for consumers as it may not work in some recipes.</p> <p>N 4. Intense sweeteners (eg saccharin) sometimes have an aftertaste this is bad because it may make them unpleasant to the consumer.</p> <p>N 5. Some countries have banned the use of sweeteners this is bad for consumers as it suggests they may have an adverse effect on health.</p> | | |

| Question | | Expected Answer(s) | Max Mark | Additional Guidance |
|----------|---|---|----------|---------------------|
| 4 | d | <p>(cont)</p> <p>(ii) Fairtrade foods</p> <p>Positive</p> <p>P 1. Fairtrade products guarantees a decent income for the produce this is good as reassures ethical consumers they are helping support low income workers/ developing countries.</p> <p>P 2. In some cases the quality of the food is higher in Fairtrade products, which is good because the consumer may receive a better quality product.</p> <p>P 3. The Fairtrade foods are clearly marked so this is good as consumers can easily identify these products when shopping so will save time.</p> <p>P 4. There is an increasing range of Fairtrade products which is good so consumers now have a wider choice of produce.</p> <p>P 5. Most Fairtrade products generally do not cost more than other products which is good as the consumer is not out of pocket if they wish to choose Fairtrade.</p> <p>P 6. Fairtrade encourages purchase through Fairtrade stores/supermarkets/catalogues/ websites therefore Fairtrade products are available for the consumer from a variety of sources making shopping easier for the consumer.</p> <p>P 7. Fairtrade producers use environmentally friendly practices which is good so ethical consumers know they are helping support the environment.</p> <p>Negative</p> <p>N 1. Some Fairtrade foods are expensive to buy this is bad for the consumer as they will pay more for the food product.</p> <p>N 2. Some shops may not stock Fairtrade products which can be a problem as it will make it difficult for the consumer to source Fairtrade produce.</p> <p>N 3. Many Fairtrade products are transported from other countries and this is bad for the environmentally friendly consumers because of the carbon footprint concerns/air miles/ environmental impact so will not purchase them.</p> <p>N 4. There is a limited range of Fairtrade products available this is not good therefore giving less choice for consumers.</p> | | |

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| Higher Home Economics. Analysis of the 2015 Question Paper Context: | Health and Food Technology |
| Section A | |

| Question | Resource Management Unit | | Consumer Studies Unit | | Course Skills | | Totals |
|---------------|------------------------------------|------|--|------|---------------|------------|--------|
| | Course content | Mark | Course content | Mark | Knowledge | Evaluation | |
| 1 | Function and sources of nutrients. | 1 | | 0 | 1 | 0 | 1 |
| 2 | Function and sources of nutrients. | 1 | | 0 | 1 | 0 | 1 |
| 3 | Sensory testing. | 1 | | 0 | 1 | 0 | 1 |
| 4 | Effects of storage on nutrients. | 1 | | | 1 | 0 | 1 |
| 5 | | | Current statutory food labelling requirements. | 1 | 1 | 0 | 1 |
| 6 | | | The consumer within the European dimension. | 1 | 1 | 0 | 1 |
| 7 | Dietary needs: vegan. | 1 | | | 1 | 0 | 1 |
| Totals | | 5 | | 2 | 7 | 0 | 7 |

Section A (continued)

| Question | Resource Management Unit | | Consumer Studies Unit | | Course Skills | | Totals |
|------------------------|---|------|--|--|---------------|------------|--------|
| | Course content | Mark | Course content | Mark | Knowledge | Evaluation | |
| 8 | Function and sources of the nutrients. | 1 | Sale and Supply of Goods Act 1994. | 0 | 1 | 0 | 1 |
| 9 | | | | 2 | 2 | 0 | 2 |
| 10 | Factors affecting finished product. | 2 | | 0 | 2 | 0 | 2 |
| 11 | The use of DRV's and awareness of needs for: convalescents. | 2 | | 0 | 2 | 0 | 2 |
| 12 | Current Dietary Advice. | 2 | | 0 | 2 | 0 | 2 |
| 13 | | 0 | | Roles and responsibilities of Food Standards Agency (FSA). | 2 | 2 | 0 |
| 14 | | 0 | The impact of technological developments on consumer choice of food. | 2 | 0 | 2 | 2 |
| Carried forward | | 5 | | 2 | 7 | 0 | 7 |
| Totals | | 12 | | 8 | 18 | 2 | 20 |

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| Higher Home Economics. Analysis of the 2015 Question Paper Context: | Health and Food Technology |
| 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: Pregnancy. | 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 |

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| Higher Home Economics. Analysis of the 2015 Question Paper Context: | Health and Food 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. | 4 | | | 4 | 0 | 4 |
| b) | Sensory testing. | 4 | | | 0 | 4 | 4 |
| c) | Current dietary advice. | 4 | | 0 | 4 | 0 | 4 |
| d) | | | Technological developments and consumer choice of food. | 4 | 0 | 4 | 4 |
| e) | | | Roles and responsibilities of Trading Standards Department (TSD) and Environmental Health Department (EHD). | 4 | 4 | 0 | 4 |
| Totals | | 12 | | 8 | 12 | 8 | 20 |

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| Higher Home Economics. Analysis of the 2015 Question Paper Context: | Health and Food Technology |
| Section B Question 3 | |

| Question | Resource Management Unit | | Consumer Studies Unit | | Course Skills | | Totals |
|---------------|--------------------------------|------|---|------|---------------|------------|--------|
| | Course content | Mark | Course content | Mark | Knowledge | Evaluation | |
| a) | Functional properties of food. | 4 | | 0 | 4 | 0 | 4 |
| b) | Use of DRVs: Elderly. | 4 | | 0 | 0 | 4 | 4 |
| c) | | 0 | Factors affecting consumers choice of food. | 4 | 0 | 4 | 4 |
| d) | | 0 | Food politics. | 4 | 4 | 0 | 4 |
| e) | Causes of food poisoning. | 4 | | 0 | 4 | 0 | 4 |
| Totals | | 12 | | 8 | 12 | 8 | 20 |

Section B Question 4

| Question | Resource Management Unit | | Consumer Studies Unit | | Course Skills | | Totals |
|---------------|--------------------------------|------|-----------------------|------|---------------|------------|--------|
| | Course content | Mark | Course content | Mark | Knowledge | Evaluation | |
| a) | Prevention of dietary disease. | 6 | | 0 | 6 | 0 | 6 |
| b) | | 0 | | 4 | 0 | 4 | 4 |
| c) | Sensory testing. | 6 | | 0 | 6 | 0 | 6 |
| d) | | 0 | | 4 | 0 | 4 | 4 |
| e) | | 0 | | | | | 0 |
| Totals | | 12 | | 8 | 12 | 8 | 20 |

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| Higher Home Economics. Analysis of the 2015 Question Paper Context: | Health and Food Technology |
| Question paper summary: Mark allocation | |

| Question | Unit title | | Course skills | | Totals |
|---------------------|---------------------|--------------------|--------------------|--------------------|-----------|
| | Resource Management | Consumer Studies | Knowledge | Evaluation | |
| Section A | 12 | 8 | 18 | 2 | 20 |
| Section B | | | | | |
| 1 | 20 | 0 | 10 | 10 | 20 |
| 2 | 12 | 8 | 12 | 8 | 20 |
| 3 | 12 | 8 | 12 | 8 | 20 |
| 4 | 12 | 8 | 12 | 8 | 20 |
| Totals | 56 | 24 | 52 | 28 | |
| Target range | 50-60 marks | 20-30 marks | 50-55 marks | 25-30 marks | 80 |

[END OF MARKING INSTRUCTIONS]