

## **GCSE**

### **Food Preparation and Nutrition**

#### **J309/01: Food preparation and nutrition**

General Certificate of Secondary Education

#### **Mark Scheme for June 2022**

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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**PREPARATION FOR MARKING****RM-assessor**

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM assessor Online Training*; *OCR Essential Guide to Marking*.
2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal <http://www.rm.com/support/ca>
3. Log-in to scoris and mark the **required number** of practice responses (“scripts”) and the **number of required** standardisation responses.

YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

**MARKING**

1. Mark strictly to the mark scheme.
2. Marks awarded must relate directly to the marking criteria.
3. The schedule of dates is very important. It is essential that you meet the scoris 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.
4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the scoris messaging system, or by email.

5.

**Crossed Out Responses**

Where a candidate has crossed out a response and provided a clear alternative then the crossed-out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed-out response where legible.

**Multiple Choice Question Responses**

When a multiple-choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate).

*When a question requires candidates to select more than one option/multiple options, then local marking arrangements need to ensure consistency of approach.*

**Contradictory Responses**

When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

**Short Answer Questions (requiring only a list by way of a response, usually worth only one mark per response)**

Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

**Short Answer Questions (requiring a more developed response, worth two or more marks)**

If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

**Longer Answer Questions (requiring a developed response)**

Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add a tick to confirm that the work has been seen.

7. There is a NR (No Response) option. Award NR (No Response)

- if there is nothing written at all in the answer space
- OR if there is a comment which does not in any way relate to the question (eg 'can't do', 'don't know')
- OR if there is a mark (eg a dash, a question mark) which isn't an attempt at the question

Note: Award 0 marks – for an attempt that earns no credit (including copying out the question)

8. The **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

If you have any questions or comments for your team leader, use the phone, the RM messaging system, or e-mail.

9. Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10. For answers marked by levels of response: Not applicable in F501

- a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
- b. **To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

## 11. Annotations

Annotation	Meaning
	Level 1
	Level 2
	Level 3
	Noted but no credit given
	Tick
BP	Blank page
	Repeat
	Too Vague
	Something missing/omission
	Benefit of the doubt
	Incorrect/No credit given

## 12. Subject Specific Marking Instructions

### Assessment Objectives and mapping:

#### AO1: Demonstrate knowledge and understanding of nutrition, food, cooking and preparation.

Demonstrate knowledge of nutrition, food, cooking and preparation

Demonstrate understanding of nutrition, food, cooking and preparation

#### AO2: Apply knowledge and understanding of nutrition, food, cooking and preparation.

#### AO4: Analyse and evaluate different aspects of nutrition, food, cooking and preparation, including food made by themselves and others.

Analyse different aspects of nutrition, food, cooking and preparation, including food made by themselves and others

Evaluate different aspects of nutrition, food, cooking and preparation, including food made by themselves and others

Question	AO1	AO2	AO4	Total marks	Question	AO1	AO2	AO4	Total marks
1a	4			4	9a	2			2
1b		3		3	9b		2		2
1c	3			3	9c			6	6
1d		4		4	10	8			8
2a		2	6	8					
2b	2			2					

2c	3			3					
2d	4			4					
3a	2	3		5					
3b		4		4					
4a	2			2					
4b	2	2		4					
5a	2			2					
5b	1			1					
5c			4	4					
6a		4		4					
6b	1			1					
6c	2			2					
7		4	8	12					
8a		4		4					
8b		4		4					
8c	2			2					

Question	Answer	Mark	Guidance										
1 (a)	<p>One mark for each:</p> <table border="1" data-bbox="398 368 1122 1326"> <tr> <td data-bbox="398 368 763 421"></td> <td data-bbox="763 368 1122 421"></td> </tr> <tr> <td data-bbox="398 421 763 603">  </td> <td data-bbox="763 421 1122 603">Juicer/squeezer/juice extractor</td> </tr> <tr> <td data-bbox="398 603 763 785">  </td> <td data-bbox="763 603 1122 785">Grater</td> </tr> <tr> <td data-bbox="398 785 763 1054">  </td> <td data-bbox="763 785 1122 1054">Corer/ Core cutter/ Core remover</td> </tr> <tr> <td data-bbox="398 1054 763 1326">  </td> <td data-bbox="763 1054 1122 1326">Peeler</td> </tr> </table>				Juicer/squeezer/juice extractor		Grater		Corer/ Core cutter/ Core remover		Peeler	4	<p>4x1</p> <p>If the candidate refers to any of the pieces of equipment with an acceptable type of food e.g. lime juicer, cheese grater, vegetable grater, apple corer, vegetable peeler this is acceptable.</p>
	Juicer/squeezer/juice extractor												
	Grater												
	Corer/ Core cutter/ Core remover												
	Peeler												

1	(b)		<b>Three</b> from: <ul style="list-style-type: none"> <li>• Bottling</li> <li>• Canned/tinned</li> <li>• Chilling/refrigerating</li> <li>• Chutney making</li> <li>• Dried/drying /candied/dehydrated/AFD/freeze drying</li> <li>• Frozen</li> <li>• In alcohol</li> <li>• Jam making/ jellies</li> <li>• Juicing/juice</li> <li>• Pickled</li> <li>• Vacuum packing/CAP/MAP</li> </ul>	3	3x1 Do not allow <b>in the fridge</b> . Must be suitable for fresh fruit
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Question			Answer	Mark	Guidance
1	(c)	(i)	<b>One</b> from: <ul style="list-style-type: none"> <li>• Apples/pears</li> </ul>	1	1x1
		(ii)	<b>One</b> from: <ul style="list-style-type: none"> <li>• Strawberries/raspberries/blueberries/blackberries/blackcurrants/gooseberry</li> </ul>	1	1x1 Accept any other named soft berry
		(iii)	<b>One</b> from: <ul style="list-style-type: none"> <li>• Oranges/lemons/limes/grapefruit/tangerines</li> </ul>	1	1x1
1	(d)		Up to <b>four</b> marks for a description: <ul style="list-style-type: none"> <li>• Use <b>claw</b> (grip) (1)</li> <li>• <b>Bridge</b> hold (1)</li> <li>• Peel away skin/outer layers/peel (1)</li> </ul>		1x4 Allow <b>description of bridge hold</b> – e.g. place hand over the top of the onion with a space under the hand for the knife.

		<ul style="list-style-type: none"><li>• Leave root end intact to hold it together/chop off top/chop off both ends (1)</li><li>• Cut in half/both halves should be placed down flat on a chopping board(1)</li><li>• Use a <b>vegetable knife/sharp knife</b> (1)</li><li>• Slice one way and turn/slice the other way (1)</li></ul>		Allow <b>description of claw grip</b> – e.g. use fingertips to hold the onion.  Does not have to be in the correct order.
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Question		Answer	Mark	Guidance	Level of response
2	(a)*	<p><b>Explanation of why manufacturers use different additives in food production could include e.g.:</b></p> <p><b>Preservatives</b></p> <ul style="list-style-type: none"> <li>• Make the food last longer</li> <li>• Increase shelf life</li> <li>• Prevent the food becoming spoiled by microorganisms</li> <li>• So we do not have to go shopping as often</li> <li>• Prevent food spoilage/slow down changes in colour/flavour/texture</li> <li>• Prevent food poisoning</li> </ul> <p><b>Colourings</b></p> <ul style="list-style-type: none"> <li>• Improve/intensify the colour of food</li> <li>• Make the food look more attractive</li> <li>• Replace colour lost during processing</li> <li>• Maintain a consistent colour across different batches of food</li> <li>• Add colour to food which is colourless</li> </ul> <p><b>Flavouring</b></p> <ul style="list-style-type: none"> <li>• Improve/intensify the flavour of food</li> <li>• Replace flavour lost during processing</li> <li>• Change the natural flavour</li> <li>• Change the smell of food</li> </ul> <p><b>Antioxidants</b></p> <ul style="list-style-type: none"> <li>• Helps prevent products becoming rancid</li> </ul>	8	<p>To be awarded marks in band two or three candidates must make reference to <b>two or more</b> different types of additives.</p> <p>No ticks or crosses used to annotate this question.</p> <p>Level at end of response.</p>	<p><b>Band 3 (6 - 8 marks)</b></p> <p>There is a well-developed line of reasoning which is clear and logically structured.</p> <p>The information presented is relevant and substantiated, showing a clear understanding of the use of food additives in food production.</p> <p>Specialist terms are used appropriately and correctly.</p> <p><b>Band 2 (3 - 5 marks)</b></p> <p>There is a line of reasoning presented with some structure that is in the most part relevant and supported by some evidence showing an understanding of the use of food additives in food production.</p> <p>There will be some specialist terms used although these may not always be used appropriately.</p> <p><b>Band 1 (1 - 2 marks)</b></p> <p>The information is basic and communicated in an unstructured way.</p> <p>The candidate shows limited understanding of the use of food additives in food production.</p>

		<ul style="list-style-type: none"> <li>Prevents food going brown/enzymic browning</li> </ul> <p><b>Sweeteners</b></p> <p>To reduce sugar content in food product.</p> <p>To make it suitable for consumers on a low sugar diet/reduce calorie content/less damaging for teeth than sugar</p> <p><b>Emulsifiers/stabilisers/thickeners/gelling agents/modified starch</b></p> <p>To create a desired texture/to thicken a food.</p> <p>Prevents ingredients separating/keeps it stable/ create lower fat options</p> <p><b>Anti caking agents</b></p> <p>Stop lumps forming in ingredients/stop dry ingredients sticking together.</p> <p><b>Acidity regulators/PH control agents</b></p> <p>To change or maintain acidity/PH.</p> <p><b>Fortification/adding nutrients lost during processing</b> Better nutrient content makes the product more attractive to the consumer.</p>			<p>Answers may be ambiguous or disorganised.</p> <p><b>(0) marks:</b> no response worthy of credit</p>
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Question		Answer	Mark	Guidance	
2	(b)	<p>People at <b>all</b> times/<b>all</b> people (1)</p> <p>are able to buy</p> <p><b>sufficient/enough/safe/nutritious/affordable/high quality/</b> food to meet their dietary needs. (1)</p>	2	<p>1x2</p> <p>For first mark the word <b>all</b> must be used at least once <b>or</b> a word which implies all people e.g. population/country.</p>	
2	(c)	(i)	<p><b>Two</b> advantages from:</p> <ul style="list-style-type: none"> <li>• Animals/plants have better resistance to pests/diseases/so thrive better</li> <li>• Faster/stronger growing rates/improved quantity/higher yield/bigger yield</li> <li>• More intense flavour/tastes better/better colour/improved quality/looks better</li> <li>• Can grow in more adverse conditions/drought/frost</li> <li>• Cheaper <b>to produce</b></li> <li>• <b>Higher</b> nutritional content/<b>more</b> nutrients</li> <li>• Longer shelf life</li> </ul>	2	<p>2x1</p> <p>Do not allow <b>cheaper</b> on its own.</p>
	(c)	(ii)	<p><b>One</b> disadvantage from:</p>	1	<p>1x1</p> <p>Do not accept ethical issues unless well explained.</p>

		<ul style="list-style-type: none"> <li>• Long term safety unknown/unknown side effects/health concerns</li> <li>• Environmental concerns/not good for the environment /pollen drift</li> <li>• Concerns about interfering with natural plant and animal reproduction</li> <li>• Allergy/possible impact on human health</li> <li>• Cannot tell just by looking at them</li> </ul>		Do not accept more expensive.
	<b>(d)</b>	<p>Up to <b>two</b> marks for each way described. Two ways required.</p> <ul style="list-style-type: none"> <li>• Buy fresh local produce/UK produce/from the farm/farm shop/local shop/farmers market (1) less transportation/food miles/packaging (1)</li> <li>• Use seasonal ingredients/in season (1) lower carbon footprint in the growing/rearing/transporting/food miles/not imported. (1)</li> <li>• Reduce consumption of meat/dairy/eggs (1) production of these foods have the highest carbon footprint in rearing / most land usage/deforestation(1)</li> <li>• Eat more vegetables/fruits/nuts/beans/cereals (1) production of these foods have the lowest carbon footprint/least land usage (1)</li> <li>• Choose cooking methods which use less energy/(1) less fuel (1)</li> <li>• Grow your own (1) no need for packaging/transport/less food miles (1)</li> </ul>	4	<p>2x2</p> <p><b>One mark</b> for an example, <b>two marks</b> for an example with a description.</p> <p><b>No repeats.</b></p>

			<ul style="list-style-type: none"><li>• Buy loose vegetables/fruit (1) no packaging/plastic(1)</li></ul>		
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Question			Answer	Mark	Guidance
3	(a)	(i)	For <b>one</b> mark Lack of iron in the diet/iron	1	1x1
		(ii)	<b>Two</b> from e.g. <ul style="list-style-type: none"> <li>• Beans/pulses/any named bean or pulse</li> <li>• bread</li> <li>• breakfast cereals</li> <li>• <b>Dark</b> chocolate</li> <li>• Dried fruit- apricots/raisins</li> <li>• Eggs</li> <li>• Kidney</li> <li>• leafy green vegetables/spinach/watercress/kale/broccoli/any named leafy green vegetable</li> <li>• Liver</li> <li>• Nuts</li> <li>• <b>oily</b> fish or any named <b>oily</b> fish</li> <li>• <b>Red</b> meat or any named <b>red</b> meat</li> </ul>	2	2x1  Do not accept steak or mince unless they state beef/lamb.
		(iii)	For <b>one</b> mark Teenage girls/ <b>menstruating</b> females/ Vegetarians/Vegans/pregnant women/elderly	1	1x1
		(iv)	For <b>one</b> mark	1	1x1

			Lack of energy/tired/fatigue/pale skin/feeling cold/ weak muscles/weak fingernails/ pale inner eyelids/dizzy/light headed/ short of breath/irregular heart beat/heart palpitations		
3	(b)		<p><b>Four</b> from:</p> <ul style="list-style-type: none"> <li>• Do not add salt at the table to food.</li> <li>• Do not add salt when cooking/ more homemade dishes where you control salt content/ use reduced salt recipes/use low sodium salt</li> <li>• Add other flavouring/herbs and spices <b>in place/to substitute</b> salt.</li> <li>• Check food labels for salt content/choose food with low salt content/ choose reduced salt ingredients.</li> <li>• Eat less processed food/salty snacks/named salty snack/ready meals/fast foods/take away.</li> <li>• Avoid using salty ingredients such as soy sauce/stock cubes/readymade sauces.</li> <li>• Eat no more than 6g/1 teaspoon per day</li> </ul>	4	4x1

Question		Answer	Mark	Guidance
4	(a)	<p><b>Two</b> from :</p> <ul style="list-style-type: none"> <li>• Cheese</li> <li>• Fish/named fish</li> <li>• <b>Fresh</b> pasta</li> <li>• Meat/named meat</li> <li>• Poultry/named poultry</li> <li>• Pre prepared fruit/ named fruit/fruit</li> <li>• Pre prepared vegetables/ named vegetable/vegetables</li> </ul>	2	<p>2x1</p> <p>Only suitable named fruit or vegetable e.g. mango, apples, pears, melon, beetroot.</p>
	(b)	<p>Up to <b>four</b> marks for a description e.g.</p> <ul style="list-style-type: none"> <li>• Store food between 0°- 5°C//keep out of danger zone</li> <li>• Cover/wrap food</li> <li>• Use correct storage areas/salad draw/bottle shelf</li> <li>• Unpack shopping as soon as you get home/refrigerate as soon as possible after purchase</li> <li>• Check use by dates/rotate stock/ use oldest food first/date label food</li> <li>• Allow food to cool before putting in refrigerator</li> <li>• Keep raw and cooked food separate/raw food on bottom shelf</li> <li>• high risk food on top shelf/or named high risk foods.</li> </ul>	4	4x1
5	(a)	<b>Two</b> from:	2	2x1

		<ul style="list-style-type: none"><li>• Food</li><li>• Moisture/moist</li><li>• Time</li><li>• Warmth/warm</li></ul>		Do not accept <b>heat/ oxygen/milk/liquid.</b> Named condition only.
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Question		Answer	Mark	Guidance
5	(b)	<p><b>One</b> from:</p> <ul style="list-style-type: none"> <li>• Bad smell</li> <li>• Discolouration</li> <li>• Excess moisture/goes soft/soggy</li> <li>• Mould (growth)</li> </ul>	1	<p>1x1</p> <p>Accept relevant examples – e.g. red meat turning brown/food smelling gone off.</p> <p>Do not accept change in colour as this could be ripening.</p>
5	(c)	<ul style="list-style-type: none"> <li>• Not allowing blood from <b>raw</b> food to come into contact with cooked food/not allowing juices from <b>raw</b> food to come into contact with cooked food/Use separate or different coloured chopping boards for <b>raw</b> and cooked food / clean work surfaces/equipment between preparing <b>raw</b> and cooked food/ (1) prevent cross contamination/bacteria being transferred from one food to another. (1)</li> <li>• Wash hands before and during food preparation/after touching raw food/cover cuts with blue plaster(1) prevents bacteria from the body being passed onto food(1)</li> <li>• Thaw frozen food properly(1) so food reaches a temperature suitable to commence cooking. (1)</li> <li>• Do not prepare food too far in advance(1) less time for bacterial growth/less time in danger zone(1)</li> <li>• Do not prepare food if you are suffering from food poisoning/sore throat/sickness/diarrhoea(1)</li> </ul>	4	<p>2x2</p> <p>Answers should relate to preparation of food only – not cooking or serving .</p> <p>Up to <b>two</b> marks for a way explained. Two ways required.</p>

			as you can pass this on to others through the food you prepare(1)		
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Question			Answer	Mark	Guidance
6	(a)	(i)	For <b>one</b> mark: Correct texture/rise/correct consistency/not too dry or too wet/ correct taste.	1	.
		(ii)	For <b>one</b> mark: Prevent lumps/adds air/aeration/aerates	1	Do not accept smooth
		(iii)	For <b>one</b> mark: Eggs do not coagulate/cook/become solid/scramble	1	Do not accept curdle
		(iv)	For <b>one</b> mark: Create correct texture/colour/so they do not collapse/so they are crisp in texture/so they rise/to <b>create</b> or <b>make</b> steam.	1	
6	(b)		For <b>one</b> mark: Steam/water <b>vapour</b>	1	Do not accept water.
6	(c)		<b>Two</b> from:  <ul style="list-style-type: none"> <li>• Crisp outer/crispy outer</li> <li>• Golden/golden brown colour/golden crust</li> <li>• Hollow inside/not soggy inside/soft inside /air pockets inside</li> <li>• Well risen/risen/light and airy</li> </ul>	2	2x1 Do not accept <b>light</b> alone Do not accept <b>crisp</b> or <b>crispy</b> alone it must say <b>outer</b> or imply on the outside Do not accept <b>soft</b> alone. Do not accept <b>airy</b> alone

Question	Answer	Mark	Guidance	Levels of response
7*	<p>Discussion of the importance of the following commodity groups when planning a healthy diet:</p> <ul style="list-style-type: none"> <li>• Milk</li> <li>• Meat</li> <li>• Bread</li> </ul> <p>could include:</p> <p><b>Milk</b></p> <p>Nutrients – HBV protein – growth and repair/secondary source of energy</p> <p>Water – hydration</p> <p>Calcium and phosphorous – bone health</p> <p>Phosphorous – muscle function/energy production.</p> <p>Vitamin A – growth, development, sight in dim light</p> <p>Vitamin D – works with calcium</p> <p>Vitamin B1 - helps release energy from carbohydrates/growth/functioning of nervous system.</p> <p>Vitamin B2 – release of energy/transport and metabolism of iron/growth/healthy skin.</p> <p>Vitamin B3- metabolism/growth/energy release/healthy skin/mucus membranes/nerves</p> <p>Iodine – control metabolic rate/thyroid hormone</p> <p>Fat – energy source.</p> <p>Other</p>	12	<p>For <b>Band 3</b> milk, meat and bread must be discussed.</p> <p>No ticks or crosses used to annotate this question.</p> <p>Level at end of response.</p>	<p><b>Band 3 (9–12 marks)</b></p> <p>An excellent, well-balanced discussion showing thorough understanding of the importance of milk, meat and bread when planning a healthy diet.</p> <p>There is a well-developed line of reasoning which is clear and logically structured.</p> <p>The information presented is relevant and substantiated using examples.</p> <p>Use of specialist language is accurate.</p> <p><b>Band 2 (5-8 marks)</b></p> <p>A good and mainly well-balanced answer showing some understanding of the importance of milk, meat and bread when planning a healthy diet.</p> <p>There is a line of reasoning presented with some structure which is in the most part relevant. Some examples used.</p> <p>There will be some specialist terms used although these may not always be used appropriately.</p> <p><b>Band 1 (1–4 marks)</b></p>

	<p>Different varieties available some lower in fat- useful if reducing fat in the diet. Lower fat varieties contain less fat-soluble vitamins A and D</p> <p>Non-dairy milk available – suitable for people with allergies</p> <p>Many uses – breakfast/drinks/sauces</p> <p><b>Meat</b></p> <p>HBV – Protein- growth and repair/secondary source of energy</p> <p>Iron – in red meat prevents anaemia</p> <p>Fat soluble vitamins A and D, depending on the fat content of the meat.</p> <p>Vitamin A – growth, development, sight in dim light</p> <p>Vitamin D – works with calcium – strong bones</p> <p>Vitamin B2 – release of energy/transport and metabolism of iron/growth/healthy skin.</p> <p>Vitamin B 3 – metabolism/growth/energy release/healthy skin/mucus membranes/nerves</p> <p>Vitamin B 12 – normal function of nervous system</p> <p>Zinc – immune system</p> <p>Smoked meat – contains sodium so should not eat too often/contains additives/preservatives</p> <p>Processed meat/meat products/ red meat – max. 70g per day – linked to bowel cancer</p> <p>Fat – some types high in fat can raise blood cholesterol levels – sausages/meat products/ meat pies and pasties.</p>		<p>Some demonstration of knowledge and/or understanding of the importance of milk, meat and bread when planning a healthy diet.</p> <p>The information is basic and communicated in an unstructured way.</p> <p><b>0 Marks:</b> no response worthy of credit</p>
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		<p>Choosing leaner cuts/white meat/poultry with skin removed/ 5% fat minced beef etc. – lower in fat</p> <p>Many varieties/uses</p> <p><b>Bread</b></p> <p>Starchy carbohydrate / base meals on starchy carbohydrates– source of energy</p> <p>Wholemeal/wholegrain- contains more fibre, healthy digestive system/diverticulitis – lack of fibre in diet.</p> <p>Vitamin B1 found in wholegrains – helps release energy from carbohydrates/growth/functioning of nervous system.</p> <p>Starchy foods should make up about one third of the diet daily</p> <p>Staple food/many varieties available</p> <p>Many uses- breakfast, packed lunch, accompany a meal</p> <p>Gluten free varieties available – suitable for allergies.</p> <p>White flour is fortified</p> <p>All are part of the eat well guide</p> <p><b>Award credit for any other appropriate response</b></p>			
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Question		Answer	Mark	Guidance
8	(a)	<p>Up to <b>four</b> marks for an explanation e.g.</p> <p>Flour/starch absorbs liquid/milk when heated/ at (60°C) and expand/ swell (1)</p> <p>As the sauce becomes hotter(80°C) starch granules burst and release molecules into the liquid (1)</p> <p>Starch molecules trap water molecules and stop them moving around as much (1)</p> <p>At boiling point (100°C) the sauce completely thickens(1)</p> <p>Gelatinisation takes place (1)</p>	4	<p>1x4</p> <p><b>Temperatures are not necessary</b> to gain the marks.</p>
8	(b)	<p>Up to <b>four</b> marks for a scientific explanation e.g.</p> <p>By emulsification /is an emulsion(1)</p> <p>By combining oil and water/by combining two immiscible liquids/ prevents oil and water separating (1)</p> <p>Acid/vinegar/lemon juice combined with egg yolk the <b>egg yolk/lecithin</b> is the <b>emulsifier</b> (1)</p> <p>Mixture is whisked to distribute the <b>oil evenly</b> (1)</p> <p>Oil is added into the mixture <b>gradually/drop by drop</b> to prevent the mixture from curdling(1)</p> <p>Emulsifier has a water liking/hydrophilic end and a water disliking/hydrophobic end and prevents separation (1)</p> <p>Emulsifier lowers the <b>surface tension</b> between the two liquids so they can combine and form a stable emulsion(1)</p>	4	<p>4x1</p> <p>Does not have to be written in this order.</p>
8	(c)	<p>Up to <b>two</b> marks for a description e.g.</p>	2	

			Flavour is developed/flavour becomes stronger/more intense/richer flavour (1) Liquid evaporates/sauce becomes thicker/sauce thickens (1)		
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Question		Answer	Mark	Guidance
9	(a)	<p>lacto-ovo – eat dairy products/named dairy product (1) eggs (1) honey(1) <b>or</b></p> <p>Vegans do not eat (1) dairy product/named dairy product (1) eggs(1) honey(1)</p>	2	<p>1x2</p> <p>The <b>difference</b> must be clearly stated.</p> <p>Reference to animal products is too vague.</p>
9	(b)	<p>Any <b>two</b> different dishes containing fruit/vegetables/milk/eggs/cheese/dairy products/beans/pulses. but <b>not</b> meat or fish</p>	2	<p>2x1</p> <p>Accept any suitable dish/meal for a <b>lacto-ovo vegetarian</b>.</p> <p>Not a <b>single</b> ingredient e.g. chips/noodles.</p> <p>Accept vegan lasagne etc. but not lasagne alone.</p>

Question		Answer	Mark	Guidance	Levels of response
9	(c)*	<p><b>Discussion of the factors that influence an individual's energy requirements could include:</b></p> <ul style="list-style-type: none"> <li>• Gender</li> <li>• Life stage</li> <li>• Pregnancy/lactation</li> <li>• Size/body weight</li> <li>• Deficiency and excess</li> </ul> <p>Males need more energy than females as they are usually larger and have more muscle.</p> <p>Life stage/age- babies and young children need more energy as they are very active/teenagers for growth/as people get older their energy needs reduce.</p> <p>Pregnancy/lactation – additional energy needed in the last three months of pregnancy and while breastfeeding.</p> <p>Size/body weight- lean bodies are metabolically more active so are more likely to burn off excess energy than heavier bodies.</p>	6	<p>Answers in mark bands 2/3 at least <b>two</b> factors must be discussed.</p> <p>No ticks or crosses used to annotate this question.</p> <p>Level at end of response.</p>	<p><b>Band 3 (5–6 marks)</b></p> <p>There is a well-developed line of reasoning which is clear and logically structured.</p> <p>The information presented is relevant and substantiated.</p> <p>Shows thorough understanding of factors which influence an individual's energy requirements.</p> <p>Use of specialist language is accurate.</p> <p><b>Band 2 (3–4 marks)</b></p> <p>There is a line of reasoning presented with some structure which is in the most part relevant.</p> <p>Shows good understanding of factors which influence an individual's energy requirements.</p> <p>There will be some specialist terms used although these may not always be used appropriately.</p> <p><b>Band 1 (1–2 marks)</b></p>

		<p>Occupation – active physical job requires more energy/sitting down job less energy used</p> <p>Lifestyle/activity levels/PAL- the more active the more energy needed/participation in sport/in cold weather people need to eat more.</p> <p>Health – when unwell the body may require more energy to fight off disease/if you have no appetite to eat the body will use energy stores/fat</p> <p>Basal metabolic rate – the amount of energy needed to stay alive.</p> <p><b>Award credit for any other appropriate response</b></p>			<p>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</p> <p>Limited understanding of factors which influence an individual’s energy requirements.</p> <p>Answers may be ambiguous or disorganised.</p> <p><b>0 Marks:</b> no response worthy of credit</p>
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Question		Answer		Mark	Guidance									
10				8	8x1 <b>One</b> mark for each correct function, max 4 <b>One</b> mark for each correct food source, max 4									
			<table border="1"> <thead> <tr> <th></th> <th>Function</th> <th>Food source</th> </tr> </thead> <tbody> <tr> <td><b>Folic acid/folate (vitamin B9)</b></td> <td>                             formation of red blood cells/                              foetal development/                              prevents spina bifida in babies/                              reduce risk of birth defects                         </td> <td>                             Liver                              wholegrain cereals                              pulses/named pulse                              dark green vegetables/named                              dark green vegetable                              peas                              oranges/lemons                              bananas                              breakfast cereal                              bread                         </td> </tr> <tr> <td><b>Sodium</b></td> <td>                             Controls amount of water in body/                              maintains water balance/                              helps control nerves and muscles/                              nerve transmission/                              helps the body to use energy                         </td> <td>                             Salt                              Cheese                              stock cubes                              Yeast extract/Marmite                              ham                              bacon                              crisps/salted nuts                              soy sauce                         </td> </tr> </tbody> </table>				Function	Food source	<b>Folic acid/folate (vitamin B9)</b>	formation of red blood cells/ foetal development/ prevents spina bifida in babies/ reduce risk of birth defects	Liver wholegrain cereals pulses/named pulse dark green vegetables/named dark green vegetable peas oranges/lemons bananas breakfast cereal bread	<b>Sodium</b>	Controls amount of water in body/ maintains water balance/ helps control nerves and muscles/ nerve transmission/ helps the body to use energy	Salt Cheese stock cubes Yeast extract/Marmite ham bacon crisps/salted nuts soy sauce
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				<p>ready meals</p> <p>Fish from the <b>sea</b>/named fish from the <b>sea</b></p> <p>smoked meat</p>		<p>Fluoride – do not accept <b>healthy</b> bones/teeth</p>
			<p><b>Fluoride</b></p>	<p>Strengthen bones/ tooth enamel/ prevents tooth decay/ keeps teeth strong</p>	<p>Fish</p> <p>Seafood</p> <p>Water</p> <p>Tea</p>	
			<p><b>Iodine</b></p>	<p>produce thyroxin/ controls metabolic rate</p>	<p>Seafood/named seafood</p> <p>Seaweed/kelp samphire</p> <p>Milk</p> <p>Dairy foods/named dairy food</p>	

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