

GCSE (9–1)

Food Preparation and Nutrition

J309/01: Food preparation and nutrition

General Certificate of Secondary Education

2021 Mark Scheme (DRAFT)

This is a DRAFT mark scheme. It has not been used for marking as this paper did not receive any entries in the series it was scheduled for. It is therefore possible that not all valid approaches to a question may be captured in this version. You should give credit to such responses when marking learner's work.

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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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1. Annotations

Annotation	Meaning
	Level 1
	Level 2
	Level 3
	Noted but no credit given
	Tick
	Blank page
	Repeat
	Unclear
	Benefit of the doubt
	Incorrect/No credit given

2. 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
1a	2			2
1b	3			3
2a*		6		6
2b	4			4
2cii,ii	4			4
3*			12	12
4ai,ii	3			3
4b		2		2
4ci,ii	5			5
4di,ii		4		4
5a		3		3
5b	1			1
5ci,ii	1	4		5
5d*			8	8
6	3	3		6
7a	3	3		6
7bi,ii,iii	3			3
8		6		6
9ai,ii	1	3		4
9bi,ii,iii	2	2		4
10a	5			5
10bi,ii,iii		4		4

Question			Answer	Mark	Guidance
1	a		Two reasons from: <ul style="list-style-type: none"> • Improve taste/develop flavour • Make it safe to eat/kill harmful bacteria • Improve texture • Improve appearance/colour • Variety in the diet Award credit for any other appropriate response	2	2 x 1 mark
	b		One mark for each method from: <ul style="list-style-type: none"> • Conduction • Convection • Radiation 	3	3 x 1 mark Answers can be in any order

Question			Answer	Mark	Guidance	Level of response
2	a*		<p>Explanation of processing wheat into flour could include:</p> <ul style="list-style-type: none"> • Wheat grains removed from plants • Processed through milling • Wheat grains cleaned to remove stones etc. • Wheat is conditioned by using water to soften the outer layer/pericarp/bran of the wheat to make is easier to remove the floury endosperm during milling • Wheat is blended by gristing to make different kinds of flour • Wheat grains/grist are milled/crushed/ground • Stage 1 passes through break rolls to shear open/not crush the wheat – separating the white inner from the outer skin • Stage 2 fragments of wheat germ are sieved • Wholemeal/grain flour contains all the layers of wheat • Brown flour some layers removed/bran removed • Sieved to remove outer layers to produce white flour <p>Award credit for any other appropriate response</p>	6		<p>Band 3 (5-6 marks) There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant showing a clear understanding of how wheat is processed into flour. Specialist terms are used appropriately and correctly</p> <p>Band 2 (3–4 marks) There is a line of reasoning presented with some structure that is in the most part relevant and supported by some evidence of understanding how wheat is processed into flour. There will be some specialist terms used although these may not always be used appropriately.</p> <p>Band 1 (1–2 marks) The information is basic and communicated in an unstructured way. The candidate shows limited understanding of how wheat is processed into flour. Answers may be ambiguous or disorganised.</p> <p>0 marks: no response worthy of credit</p>

Question			Answer	Mark	Guidance
2	b		<p>Up to four marks for a description e.g.</p> <p>Flour made from durum wheat / high gluten flour Mixed with egg/water/additional ingredients to make a dough Knead dough Dough rolled/cut/shaped</p> <p>Award credit for any other appropriate response</p>	4	Must relate to fresh pasta
2	c	(i)	<p>Two from:</p> <ul style="list-style-type: none"> • bread • rice • cereals or named cereal • potatoes • beans or named beans • lentils • peas • chickpeas • squash • corn • parsnips • banana • plantain <p>Award credit for any other appropriate food <u>with a high starch content</u></p>	2	<p>2x1 mark</p> <p>Do not accept</p> <ul style="list-style-type: none"> • pasta or flour – as given in the question.
		(ii)	<p>Two functions from:</p> <ul style="list-style-type: none"> • Provides energy • Adds bulk to the diet • gives a feeling of fullness/feel fuller for longer • excess is converted to fat. <p>Award credit for any other appropriate response</p>	2	2x1 mark

Question	Answer	Mark	Guidance	Level of response
3*	<p>Discussion of the dietary advice for teenagers to ensure a healthy diet could include:</p> <p>Government Guidelines e.g. Balanced food combinations:</p> <ul style="list-style-type: none"> • follow Eatwell guide • healthy eating guidelines • eat regular balanced meals • don't skip meals • don't skip breakfast as eating breakfast helps concentration • don't snack • don't eat too much fast food • energy dense food in place of balanced meals • Keep correct energy balance to maintain healthy weight • don't follow unhealthy diet trends • choose wholegrain options to increase fibre in the diet. <p>Correct portion size:</p> <ul style="list-style-type: none"> • read labels and serving instructions and follow advice. • Use visual guides: • medium bowl of cereal • small bunch grapes • 5 a day • slices • use serving spoons / scoop / handful <p>Nutritional needs e.g.</p> <ul style="list-style-type: none"> • Time of growth • need for protein • Substances in body made from protein include hormones needed for growth and reproduction. 	12	For bands 3 and 2 answers must address nutritional needs and government guidelines	<p>Band 3 (9-12 marks) An excellent well-developed answer showing thorough understanding and the ability to discuss the nutritional needs for a healthy diet for teenagers including government guidelines. There is a well-developed line of reasoning which is clear and logically structured. Information presented is relevant and substantiated.</p> <p>Band 2 (5-8 marks) A good well-balanced answer showing good clear understanding and the ability to discuss the nutritional needs for a healthy diet for teenagers including government guidelines. There is a line of reasoning presented with some structure which is in the most part relevant.</p> <p>Band 1 (1-4 marks) Some attempt to discuss the nutritional needs for a healthy diet for teenagers including government guidelines but with limited nutritional knowledge and the discussion of different requirements may not be clear. The information is basic and presented in an unstructured way.</p>

		<ul style="list-style-type: none"> • Fat needed in correct amount for energy, insulation, protection and to provide fat soluble vitamins. • Carbohydrate for energy and dietary fibre for waste removal. • Bones and teeth need calcium and vitamin D to reach peak bone mass– eat milk/milk products/canned fish with bones. • Slow release energy foods prevent tiredness and lack of concentration. • Oily fish aids concentration. • Water – prevents dehydration/for healthy skin. <p>Award credit for any other appropriate response</p>			<p>0 Marks: no response worthy of credit.</p>
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Question			Answer	Mark	Guidance
4	a	(i)	<p>One reason from:</p> <ul style="list-style-type: none"> • Improve sensory qualities • Improve colour/appearance • Improve flavour/taste • Improve smell • Sweetener – sugar substitute • Preserve/increase shelf life • Improve texture / structure / stabilise / emulsify <p>Award credit for any other appropriate response</p>	1	
	a	(ii)	<p>Up to two marks for an explanation e.g.</p> <p>Tells the consumer date by which food should be eaten (1) to ensures food is safe to eat/ after this it is unsafe to eat. (1)</p> <p>Award credit for any other appropriate response</p>	2	<p>1x2 marks Must relate to ‘use by date’</p>
	b		<p>Up to two marks for an explanation e.g.</p> <p>Check e.g, To look at the colour of the fruit (1) To look at the appearance of the fruit (1) Appropriate explanation e.g. to see if it is the correct colour/bright colour (1) to ensure it is not damaged/broken, squashed (1) to see if the fruit is in good condition /overly ripe//safe to eat (1).</p> <p>Award credit for any other appropriate response</p>	2	<p>1x2 marks Must relate to ‘visual checks’ of fresh fruit only.</p> <p>One mark for check, one mark for explanation.</p>

Question			Answer	Mark	Guidance
4	c	(i)	Three from: <ul style="list-style-type: none"> • Correct temperature/warm • Moisture • Food • Time • PH 	3	3x1 mark
		(ii)	One mark for each from: <ul style="list-style-type: none"> • Yeast • Bacteria 	2	2x1 mark Answers can be in any order
	d	(i)	One personal hygiene rule identified e.g. <ul style="list-style-type: none"> • Wash hands before/ during/ after preparing/ handling fresh chicken • Tie back/cover hair/beard • Do not cough/sneeze over food • Wear apron/cover outdoor clothes • No jewellery • No nail varnish/false nails/clean nails • Cover cuts • Do not touch inside of mouth/ears/nose <p>Explanation of rule e.g. Prevent bacteria from a person/the body/hair hands/cuts/mouth/clothing/jewellery/nails being passed onto food</p> <p>Award credit for any other appropriate response</p>	2	1x2 One mark for identifying a personal hygiene rule. One mark for explaining how it protects against indirect contamination.

Question			Answer	Mark	Guidance
4	d	(ii)	<p>Up to two marks for an explanation. E.g.</p> <p>Reheat the chicken only once (1) to prevent growth of bacteria.(1)</p> <p>Reheat the chicken for the correct amount of time/reaches core temperature/75°C or hotter for at least 2 minutes (1) as this will kill harmful microorganisms. (1)</p> <p>Award credit for any other appropriate response</p>	2	1x 2 marks

Question			Answer	Mark	Guidance
5	a		<p>Up to three marks for a description. E.g.:</p> <ul style="list-style-type: none"> • Avoid processed foods/ ready meals/ snacks high in sugar and fat/ sugary drinks • Keep to mealtimes • Avoid snacking between meals • Follow eatwell guide/ balanced diet • Keep energy balance correct • Eat a variety of foods • Serve correct portion size/smaller portions/no second helpings <p>Award credit for any other appropriate response</p>	3	1x3 marks
	b		<p>One from:</p> <ul style="list-style-type: none"> • Cardiovascular • Coronary heart disease • Diabetes • Diverticulitis • Osteoporosis • Tooth decay • Anaemia • High blood pressure <p>Award credit for any other appropriate response</p>	1	<p>1x1 mark</p> <p>Must relate to diet related health issues</p>

Question			Answer	Mark	Guidance
5	c	(i)	<p>Up to three marks for an explanation. Explanations could include e.g.:</p> <ul style="list-style-type: none"> • Prevents dehydration/becoming ill/life threatening • Controls body temperature/prevents overheating/heatstroke • Helps kidneys remove/filter waste from the body/as urine • Helps kidneys remove harmful excess/foreign substance from the blood • Keeps skin moist/ healthy • Body cells and tissues contain water • Moistens tissues • Keeps mouth eyes and throat moist • For body fluids/ sweat/ blood/ urine/ saliva • Chemical reaction in the body use water/ dissolves minerals • Lubricates joints <p>Award credit for any other appropriate response.</p>	3	1x3 marks
		(ii)	<p>Two from:</p> <ul style="list-style-type: none"> • Fruit or named fruit • Vegetable or named vegetable • Named milk product e.g. yoghurt/rice pudding • Soup • Eggs <p>Award credit for any other appropriate food <u>with a high water content</u></p>	2	2x1 marks

Question			Answer	Mark	Guidance	Level of response
5	d*		<p>Discussion of how different cooking methods can help to support healthy eating could include:</p> <ul style="list-style-type: none"> • Shallow fry/stir fry / Baking / Grilled / Boiling / Steaming / Poaching – Little or no fat used/lower fat intake • Using fat in small amounts – Adds fat soluble vitamins • Cooking/food/ fresh vegetables quickly /little water or not boiling /braising/simmering for long periods of time – Preserves vitamins • Microwaving – Less damage to B group/vitamin C • Baking/grilling/dry frying/toasting/cook quickly – Heat damages B group vitamins • Deep fat frying / Roasting / Pan fried / Dry fry – All have fat added /energy dense/higher fat intake • Not adding salt/soya sauce/sauces/sugar – Increased salt intake/sugar intake 	8		<p>Band 3 (6-8 marks) There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated, showing a clear understanding and reasoned discussion about how different cooking methods can help to support healthy eating. Specialist terms/names of methods are used appropriately and correctly.</p> <p>Band 2 (3-5 marks) This is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence, showing some understanding and some reasoned discussion about how different cooking methods can help to support healthy eating. There will be some specialist terms/names of methods used although these may not always be used appropriately.</p> <p>Band 1 (1-2 marks) The information is basic and communicated in an unstructured way. Limited understanding is shown of how different cooking methods can help to support healthy eating. Answer may be ambiguous or disorganised.</p> <p>0 Marks: no response worthy of credit.</p>

Question			Answer	Mark	Guidance		
6				6	6 x 1 marks One mark for a good food source for each of the three micronutrients One mark for a deficiency for each of the three micronutrients		
			Calcium			Milk Cheese Yoghurt Added to flour Canned fish with soft bones Leafy green vegetables	Soft bones Rickets Osteomalacia
			Iron			Red meat Offal Leafy green vegetables Egg yolk Cocoa Plain chocolate Wholemeal bread Curry powder	Anaemia
			Vitamin C			Citrus fruit Named citrus fruit <ul style="list-style-type: none">• Orange• Lime• Lemon Kiwi Blackcurrants Sprouts Broccoli Potatoes Cabbage	Scurvy
			Award credit for any other appropriate response				

Question			Answer	Mark	Guidance
7	a		<p>Up to two marks for each term description</p> <p>Seasonal foods: Fresher and maybe cheaper at a particular time of year when they are ready to harvest/available</p> <p>Free-range products: Kept in natural conditions with freedom to move.</p> <p>Sustainable fish supply: Fishing in a way that can maintain fish supply over a long period of time and protects the environment.</p> <p>Award credit for any other appropriate response</p>	6	3 x 2 marks

Question			Answer	Mark	Guidance
7	b	(i)	One from: <ul style="list-style-type: none"> • Salmon • Herring • Kipper • Sardines • Pilchards • Sprats • Trout • Mackerel Award credit for any other named <u>oily fish</u>	1	
		(ii)	One from: <ul style="list-style-type: none"> • Cod • Haddock • Hake • Whiting • Pollock • Sea bass • Coley • Sole • Halibut • Turbot • John Dory • Grouper Award credit for any other named <u>white fish</u>	1	
		(iii)	One from: <ul style="list-style-type: none"> • Chicken • Turkey • Goose • Duck Award credit for any other named <u>poultry</u>	1	

Question	Answer	Mark	Guidance
8	<p>Up to two marks for each religious/cultural belief food choice influence described e.g.</p> <p>Hinduism</p> <ul style="list-style-type: none"> • Beef is not eaten – as cow is held in high regard/sacred • Mainly vegetarian – avoid food that may have caused pain to an animal • Onion/garlic/alcohol avoided – as they are thought to affect the search for spiritual enlightenment. <p>Islam</p> <ul style="list-style-type: none"> • Poultry and meat animals slaughtered in a special ritual • Halal/(Zibah)/so no blood remains • Pork not consumed – considered to be unclean • Alcohol and caffeine - Unlawful foods/haram – • Ramadan fast – from dawn to dusk <p>Judaism</p> <ul style="list-style-type: none"> • Pork/shellfish cannot be eaten • Dairy and meat cannot be prepared or eaten together • Food that is allowed is called kosher- fish that have scales and fins/animals that eat grass and have split hooves e.g. sheep and cows • No cooking allowed on Saturday/sabbath • Yom Kippur fast <p>Award credit for any other appropriate response</p>	6	3 x 2 mark

Question			Answer	Mark	Guidance								
9	a	(i)	One mark for each function of protein. Three required. <ul style="list-style-type: none">• Growth• Repair of body• Energy source	3	3 x 1 mark Answers can be in any order								
		(ii)	<table><tr><td>Type of protein</td><td>Tick (✓) the high biological value protein food</td></tr><tr><td>Nuts</td><td></td></tr><tr><td>Peas</td><td></td></tr><tr><td>Soya beans</td><td>✓</td></tr></table>	Type of protein	Tick (✓) the high biological value protein food	Nuts		Peas		Soya beans	✓	1	
Type of protein	Tick (✓) the high biological value protein food												
Nuts													
Peas													
Soya beans	✓												
	b	(i)	One mark for each function of fat. Two required. <ul style="list-style-type: none">• Provide energy/store of energy• Insulate body/keep warm• Promote the feeling of being full• Carry/absorb fat soluble vitamins/A,D,E,K Award credit for any other appropriate response	2	2x 1 mark Do not accept answers about protecting vital organs as that is given in the question.								
		(ii)	One from: <ul style="list-style-type: none">• Fat on meat• Butter• Lard• Suet• Dripping• Ghee Award credit for any other appropriate example of a visible animal fat	1									
		(iii)	One from: <ul style="list-style-type: none">• Fat in cakes/pastry/biscuits• Cheese• Processed foods/ready meals• Meat products/ sausages/ burgers/ salami/ corned beef Award credit for any other appropriate example of invisible animal fat	1									

Question			Answer	Mark	Guidance
10	a		One mark for each sense named. Five required. <ul style="list-style-type: none"> • Sight • Smell • Taste • Touch • Hearing 	5	5 x 1 mark Answers can be in any order
	b	(i)	One from: <ul style="list-style-type: none"> • Salad/Lettuce/Tomato/cucumber • Green herb - parsley/ basil • Onion Award credit for any other appropriate response	1	
		(ii)	One from: <ul style="list-style-type: none"> • Brush with egg or milk • pastry shapes e.g. leaves/crimping edges Award credit for any other appropriate response	1	
		(iii)	Two from: <ul style="list-style-type: none"> • Add seasoning/salt/pepper • Add cheese • Add herbs/ named herb – parsley/dill • Add onion • Add breadcrumbs Award credit for any other appropriate response	2	2 x1 mark

OCR (Oxford Cambridge and RSA Examinations)
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA

OCR Customer Contact Centre

Education and Learning

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

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