

GCSE (9-1)

Examiners' report

FOOD PREPARATION AND NUTRITION

J309

For first teaching in 2016

J309/01 Summer 2019 series

Version 1

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Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates. The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report. A full copy of the question paper can be downloaded from OCR.

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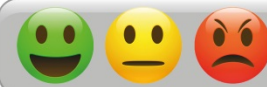
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Paper 1 series overview

Paper J309/01

It was pleasing to see the vast majority of candidates attempted to answer all the questions on the paper. It was also evident that candidates had sufficient time to answer all the questions as the vast majority of candidates worked their way through the entire paper.

The paper appeared to be accessible to candidates of all abilities. To perform well on the paper candidates needed to have covered the whole specification and be able to demonstrate scientific knowledge and understanding of food preparation and nutrition. Candidate performance was very mixed with a wide range of ability evident.

Many candidates had been well prepared for the examination; however, some would benefit from more in depth knowledge of the functional properties and chemical processes as well as the nutritional content of food. Candidates understood the relationship between diet, nutrition and health; however, some could only apply general knowledge of this when answering questions, this was particularly evident in Question 9b.

Candidates would benefit from reading questions carefully and answering with information specific to what is being asked. They would also benefit from learning the definitions and meanings of subject specific terminology in order to be able to apply this to answering questions such as 4ci and 4cii.

The extended questions were attempted well by many candidates, but some responses were quite brief. Candidates would benefit from making a simple plan in order to avoid repeating information and including information that is not relevant.

Question 1 (a) (i)

1 Meat is a good source of protein.

(a) (i) State **two** functions of protein in the diet.

1

2 [2]

This question was generally well answered with growth and repair being stated, although some candidates referred incorrectly to muscle growth/muscle building.

Question 1 (a) (ii)

(ii) Explain **one** difference between high biological value protein (HBV) and low biological value protein (LBV).

.....

 [2]

Many candidates demonstrated clear knowledge and were able to state that HBV contained all the essential amino acids.

Question 1 (b)


(b) Beef contains micronutrients.

Complete the table below to show **two** micronutrients in beef.
 Give **one** different function for each micronutrient.

Micronutrient	Function of the micronutrient

[4]

Very few candidates were able to name two correct micronutrients or explain their functions. When a correct response was given (iron was often stated), the functions were often too vague to be given a mark.

	Misconception	Many candidates focused on macronutrients instead of micronutrients. It is important that students are able to distinguish between the two and know what the different functions are.
-------------------------------------------------------------------------------------	----------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Question 1 (c)

(c) Meat can be put into a marinade before it is cooked.

Give **two** reasons for putting meat into a marinade before it is cooked.

1

.....

2

.....

[2]

Many candidates were able to gain two marks with a good range of responses.

Question 1 (d)

(d) Explain **one** change that takes place when meat is cooked.

.....

.....

.....

..... **[2]**

Many candidates were able to state one change that takes place, usually stating a change in colour. They were not always able to give a scientific explanation for the change though, meaning they were unable to gain the second mark.

Question 2

2* Many consumers choose to buy Fairtrade® food products.


Explain how the production of Fairtrade products benefits the food producers and their workers, the local community and the environment.

.....

.....

.....

..... **[12]**

	Misconception	Some candidates discussed the qualities and benefits of Fairtrade products for the consumer, instead of focussing on the four areas outlined in the question: the producers, the workers, the local community and the environment.
-------------------------------------------------------------------------------------	----------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Not many candidates were able to refer to all four areas stated in the question and therefore very few achieved a Level 3 mark. There was a lack of knowledge about how the environment would benefit, although candidates did demonstrate knowledge of how the workers and their communities would benefit.

Question 3 (a)

3 Fig. 1 shows the ingredients used in a Victoria sponge made by the creaming method.

150 g self raising flour 150 g caster sugar 150 g butter 3 eggs

Fig. 1

(a) Explain scientifically what happens when the butter and sugar are creamed together.

.....
.....
..... [2]

Some candidates knew that air was beaten into the mixture and that the air was trapped, but more scientific knowledge was needed to answer this question.

Question 3 (b)

(b) Explain scientifically what happens to the sponge mixture when it is baked in the oven.

.....
.....
..... [4]

Some candidates were able to demonstrate detailed knowledge and understanding of the functions of the ingredients used in a sponge mixture, and explained the changes showing scientific knowledge.

Question 3 (c)

(c) State two qualities of a successful Victoria sponge.

1

2 [2]

Many candidates were able to state at least one quality. The most common responses were light and golden brown. When answered incorrectly, candidates had used words such as fluffy or soft and no soggy bottoms.

Question 3 (d)

(d) Victoria sponge cakes are often decorated to make them look more attractive.

Give **three** ways the Victoria sponge cake could be decorated.

- 1
- 2
- 3

[3]

Many different correct responses were given for this question, although some candidates stated ways to fill the cake rather than decorate it – which is not what the question had asked.

4 Some complex carbohydrates are a good source of energy.

(a) (i) Name **three** foods which are a good source of complex carbohydrates.

- 1
- 2
- 3

[3]

Question 4 (a) (i)

A very well answered question, allowing candidates to demonstrate clear knowledge.

Question 4 (a) (ii)

(ii) Explain why some complex carbohydrates are a good source of energy.

-
- [2]

Very few candidates were able to make a statement and explain it. Some were able to make a statement, for which they gained one mark, but were not able to explain it fully and therefore did not gain both marks.

Question 4 (b)

(b) Explain what is meant by the term energy balance.

-
-
- [2]

Candidates tended to struggle when responding to this question, demonstrating a slightly vague understanding of the term.

Question 4 (c) (i)

(c) People have different energy needs.

(i) State what is meant by the term BMR (Basal Metabolic Rate).

.....
 [1]

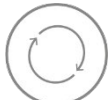
Candidates found this question challenging too, and many did not fully understand what BMR means.

Question 4 (c) (ii)

(ii) State what is meant by the term PAL (Physical Activity Level).

.....
 [1]

Similar to the two questions above, candidates tended to struggle when explaining what PAL meant.

	AfL	Candidates need to be ready to demonstrate their knowledge of key topics, and should be familiar with the terms and know what they mean.
------------------------------------------------------------------------------------	------------	------------------------------------------------------------------------------------------------------------------------------------------

Question 5 (a)

5 Consumers throw away millions of tonnes of food a year.

(a) One way to reduce food wastage is to use leftover food in a new dish.

Complete the table below to suggest **three** different dishes that could be made using the leftover food.

An example has been completed using the grated cheese.

Leftover food	Dish
Grated cheese	Cheese scones
Mashed potato	
Cooked peas and green beans	
Cooked chicken	

[3]

The majority of candidates gave three answers and many suggested credible dishes. The most common error was not making the leftover food into a dish but suggesting what it could be served with, e.g. sausage and mash, roast dinner, peas with rice.

Question 5 (b)

(b)* Other than using leftover food, explain ways consumers could reduce the amount of their food waste.

.....

.....

.....

..... [8]

Candidates were able to discuss a range of ways of reducing food waste and demonstrated their knowledge when responding the question. Some candidates had not read the question and discussed ways of using leftover food in other dishes, or suggested feeding the homeless or feeding pets.

Question 6 (a)

6 Fig. 2 shows the meals eaten by a vegetarian teenage girl for one day.

Breakfast	White toast with butter Orange squash
Lunch	Cheddar cheese sandwich (white bread and butter) Packet of crisps Shortbread biscuit Orange fizzy drink
Evening meal	Shop-bought cheese and tomato pizza Chips Doughnut
Other snacks and drinks	Packet of crisps Orange fizzy drink 3 Shortbread biscuits

Fig. 2

(a) State two nutrients that are lacking in this diet for a teenage girl.

1

2 [2]

A range of responses was given, demonstrating candidates' knowledge.


Question 6 (b)

(b) Give **three** changes which could be made to the diet so that it meets the current government nutritional advice.

- 1
- 2
- 3

[3]

Candidates displayed good knowledge of current government nutritional advice and many suggested suitable changes.

	Misconception	Some candidates did not read the question correctly and did not make explicit which foods were being changed. This meant they were unable to gain marks as they only stated 'eat more vegetables/cut down on fizzy drinks'.
-----------------------------------------------------------------------------------	----------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Question 6 (c)

(c) Give **three** reasons why some teenage girls may choose to follow a vegetarian diet.

- 1
- 2
- 3

[3]

This was a well answered question with a wide range of correct answers given. Candidates showed clear knowledge of reasons for following a vegetarian diet, as shown in the exemplar below which gained two marks. The exemplar also includes a common incorrect response – body image and similar answers.

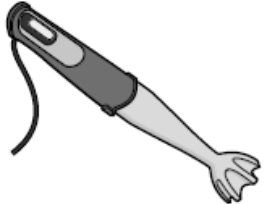


Exemplar 1

- 1 ...for ethical reasons - disagree with animal slaughter.....
- 2 ...it is generally healthier (less saturated fat).....
- 3 ...body image.....

Question 7 (a)

7 A variety of electrical equipment can be used when preparing and cooking food.

(a) Complete the table below to give the name of each piece of equipment.

Equipment	Name of the equipment
	
	
	

[3]

Many candidates answered the question well and were able to use the correct terminology when naming the equipment. Some did not specify electric for the hand whisk or food for the food processor.

Question 7 (b)

(b) Give four reasons why steaming is a popular method of cooking food.

- 1
- 2
- 3
- 4

[4]

Very few candidates were able to state four correct reasons. Answers were often vague, e.g. quick, easy, healthy and cheap, with no added fat and retaining nutrients being the most common correct responses. There was little mention of saving fuel by cooking several products at once.

Question 7 (c)

(c) Explain two factors that could influence the way consumers choose to cook food.

1

.....

.....

.....

2

.....

.....

.....

[4]

Some candidates were able to provide two factors but were unable to explain them clearly. The majority of correct responses related to health reasons with good explanations and examples. Many responses related to time but did not link this to time available. The exemplar below is an example of an excellent response, clearly explaining two factors and giving examples.

Exemplar 2

1 Their lifestyle because if they have busy, energetic lifestyles then they need to choose quicker cooking methods compared to someone who has a lot of time

2 Their health, because if they have health issues such as obesity, they would need to avoid high fat cooking methods, such as deep frying

[4]

Question 8 (a)

8 A wide range of milks and alternative milk products are available.

(a) Complete the table below to identify one different type of milk suitable for each of the consumers.

Consumer	Suitable type of milk
Two year old child	
Lactose intolerant adult	
Vegan	

[3]

Candidates displayed excellent knowledge of the range of milk types available.

Question 8 (b)

(b) Yoghurt is made from milk.

Describe how milk is made into yoghurt.

.....
.....
.....
..... [4]

Although candidates tried, some were unable to answer this question and gave answers similar to how cheese or butter is created, as seen below. Many candidates did not state that the bacteria added was harmless, although some stated it was friendly bacteria. Often candidates had the sequence incorrect but were able to state that flavours were added at the end so were able to gain that mark.

Exemplar 3

milk is made into yogurt by being whisked at a very high speed so that it becomes thicker and smoother.

Question 8 (c)

(c) Give one reason a use-by date is on a yoghurt container.

.....
..... [1]

A range of responses were given to this question, with gone off being the most frequently used incorrect response.

Question 9 (a)

9 Since 1996, the number of people diagnosed with diabetes in the UK has more than doubled from 1.4 million to almost 3.5 million.

(a) Explain the difference between type 1 diabetes and type 2 diabetes.

.....
.....
..... [2]

Candidates either had a clear understanding and were able to explain the differences or had a very vague understanding, as seen in the exemplar below.

Exemplar 4

type 2 diabetes is more serious than type one, you react in a stronger way as your more diabetec [2]

Question 9 (b)

(b)* Explain the dietary advice that you would give to a person who has type 2 diabetes.

.....
.....
.....
.....
..... [6]

The majority of candidates explained the eatwell plate/healthy eating guidelines in detail, but were not able to link their advice to diabetes in particular. Some candidates did not just give the dietary advice that was stated in the question, but talked about exercise, high blood pressure, CHD, medication and seeking help from the GP.

Question 9 (c)

(c) There has been an increase in the number of children who have tooth decay.

Explain how tooth decay is caused.

.....
.....
..... [2]

Candidates struggled with this question and many did not have solid knowledge about how tooth decay is caused.

Question 10 (a) (i)

10 (a) Temperature control is important when cooking and serving food.

(i) State the correct temperature for keeping food hot in a school canteen.

..... °C [1]

Many candidates were not sure what the correct temperature was.

Question 10 (a) (ii)

(ii) State the correct temperature to which a shepherd's pie should be reheated.

..... °C [1]

Similar to the above, many candidates were not sure what the correct temperature was.

Question 10 (b)

(b) If food is not stored correctly bacteria will grow.

State **three** conditions bacteria need to grow.

1
2
3 [3]

Many candidates were able to state at least two correct conditions.

Question 10 (c)

(c) Give three signs of food spoilage.

1

2

3

[3]

Many candidates were able to state at least two correct signs.

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