

GCSE (9-1)

Examiners' report

FOOD PREPARATION AND NUTRITION

J309

For first teaching in 2016

J309/01 Summer 2024 series

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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. A selection of candidate answers is also provided. 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 and the mark scheme can be downloaded from OCR.

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Paper 1 series overview

The paper was clearly accessible to candidates of all abilities and the vast majority attempted to answer all the questions on the paper. There was clear evidence that candidates had sufficient time to answer all the questions as most managed to work their way through the whole paper.

The wide and varied content of the specification had been fully covered and many candidates had clearly been taught well. Candidates were able to demonstrate a broad subject knowledge and applied subject specific knowledge when answering many of the questions.

To perform well on the paper precise and accurate use of scientific terminology was required so avoiding loss of marks for vague answers. Detailed and balanced answers were required in order to achieve marks in the higher bands on the banded response questions. It was clearly evident when candidates had practised answering essay type questions. Candidates who were guided by the amount of space given for the answer performed well.

Candidates would benefit from reading questions carefully, there were some misinterpretations often leading to vague or incorrect answers and the use of incorrect terminology. Some candidates required a more in-depth knowledge of chemical raising agents and minerals in particular.

Candidates who did well on this paper generally:	Candidates who did less well on this paper generally:
<ul style="list-style-type: none"> demonstrated and applied detailed nutritional knowledge when answering questions were able to write well balanced answers to Questions 4 and 9 (d) demonstrated a clear knowledge of fats could describe in detail how to set up a taste panel carefully read and answered the questions which were asked were able to use accurate scientific terminology when required. 	<ul style="list-style-type: none"> lacked knowledge of heat treatment and processing of milk could not explain scientifically how chemical raising agents work could not describe how to fillet a fish showed a lack of understanding of how to answer longer questions and a lack of understanding of command words showed evidence of noticeable guesswork where topics in previous questions were used as potential answers did not carefully read and answer the question being asked.

Question 1 (a)

1 Starch and dietary fibre are complex carbohydrates.

(a) State **three** functions of complex carbohydrates in the diet.

- 1
- 2
- 3
- [3]

The majority of candidates recognised complex carbohydrates gave 'energy'. The most common error when answering this question was providing a general statement, candidates needed to be specific in the function to gain a mark.

Question 1 (b) (i)

(b) State **two** different ways you could increase the amount of dietary fibre in each of the following dishes.

(i) Ham and cheese sandwich made with white bread

- 1
- 2
- [2]

When answered well, candidates were able to suggest increasing the dietary fibre in the dish by using wholemeal bread and adding a named salad vegetable to the sandwich.

Assessment for learning



Misunderstanding of the question was evident as responses included 'use low-fat cheese' or 'use low fat butter' or 'use high fibre cheese/ham' or 'swop the ham for chicken'. There were lots of references to using brown bread.

There was a lack of knowledge of the sources of dietary fibre. Candidates did not know what constitutes a fibre rich food. Perhaps showing a lack of understanding that fibre is also classified as a carbohydrate.

Question 1 (b) (ii)

(ii) Stewed apple with a crumble topping made with flour, sugar and butter

1

.....

2

.....

[2]

Few candidates gained 2 marks as they stated using brown sugar and different types of butter as ways of increasing dietary fibre. 1 mark was often gained for saying use wholemeal flour, use oats, or leave the skin on the apples.

Question 1 (c)

(c) Identify **two** foods that are good sources of starch.

1

2

[2]

Many candidates demonstrated clear knowledge of foods that are good sources of starch.

Question 2 (a)

2 There are many different types of milk and milk products.

(a) State the name of **one** type of milk suitable for vegans.

..... [1]

Many candidates demonstrated clear knowledge of the types of milk suitable for vegans.

Question 2 (b), (c), (d), (e) and (f)

(b) State **one** advantage of full fat milk.

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

(c) State **one** advantage of Ultra Heat Treated (UHT) milk.

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

(d) Explain why milk is homogenised.

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

(e) State **two** reasons why milk is pasteurised.

1
.....
2
.....
..... [2]

(f) Describe how milk is processed to make butter.

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

The four questions about the different types of milk and the question about how milk is processed to make butter were not well answered by candidates. There were a lot of vague answers given and this demonstrated a gap in learning.

Assessment for learning

Candidates should be taught about the heat treatment of milk and the use of high temperatures when processing and preserving foods, both industrial and domestic. Candidates should have knowledge and understanding of how milk is processed to produce butter, cream, yoghurt, and cheese.

Question 3 (a)

3 Sensory testing is used to collect information about food products.

(a) Describe how you would set up a taste panel to ensure that sensory testing is accurate.

.....

.....

.....

.....

.....

..... **[5]**

The majority of candidates were able to gain some marks for this question. Some candidates did not read/answer the question which was asked and discussed their experience of carrying out taste testing in the classroom rather than 'setting up a taste panel'. Some candidates demonstrated knowledge of the process involved but did not make their answers clear and specific enough for marks to be awarded.

Exemplar 1

Collect a large sample of tasters. Ensure that the tasters cannot communicate with each other by placing screens in between them or having separate rooms. This ensures they are not biased. Serve the samples one at a time, with water in between each sample to cleanse the palate. Food should be eaten in the same conditions each time, with the same ^{cutlery} clean ~~cutlery~~ and plates, in the same lighting and the same portion size to minimise external influence. Make sure you use coded ~~samples~~ ^{actual} samples instead of the name of the product, so the tasters are not biased by their prior knowledge of the product. [5]

This candidate response includes a variety of correct points from the mark scheme. It is clearly written and focuses on how the taste panel will be set up to ensure that sensory testing is accurate.

Question 3 (b)

(b) Receptors in the mouth sense the taste of food.

Identify **three** basic tastes.

- 1
- 2
- 3

[3]

A very well answered question, allowing candidates to demonstrate clear knowledge. If answered incorrectly savoury or spicy were stated.

Question 4*

4* A healthy diet is important for preschool age children.

Discuss the nutritional needs of preschool age children and how parents or carers can encourage preschool age children to develop healthy eating habits. **[12]**

Candidates often demonstrated a good knowledge of the nutritional requirements of preschool age children. Many responses addressed both parts of the question and gave a good balance between nutritional needs and developing healthy eating habits. Carbohydrates, protein, calcium, vitamin D and water were covered particularly well and in the most detail. Often only one or two points were covered for developing eating habits. Many candidates focussed on encouraging the preschool child to eat, as opposed to eat healthily, for example hidden vegetables, making the food look appealing but rarely linked to healthy eating. This restricted awarding marks in the top mark band.

Question 5 (a)

5 Chemical raising agents can be used when making baked products.

(a) Identify **two** chemical raising agents.

1

2 **[2]**

Many candidates answered this question well. When not well answered there was a lack of understanding of chemical raising agents and other raising agents such as steam or yeast were stated.

Question 5 (b)

(b) Explain scientifically how a chemical raising agent makes a sponge cake rise.

.....

.....

.....

.....

.....

.....

..... [4]

Candidates struggled with this question. Poorly answered with little scientific explanation and a lack of knowledge of how chemical raising agents work.

Assessment for learning



The food science topics are often the most difficult topics for candidates to understand. Linking practical work to these topics can help consolidate understanding.

Question 6*

6* Discuss why some people choose to buy fairtrade food products.

.....

.....

.....

.....

.....

.....

..... [6]

Many candidates were able to obtain marks for discussing fair pay, ethical reasons, supporting communities, better conditions for workers and protecting the environment. Very few candidates were able to answer this question in enough detail to be awarded marks in the top band.

Misconception



Common misconceptions were that Fairtrade was linked to reducing greenhouse gases, reducing the carbon footprint, and produced organically. Many candidates talked about supporting local farmers and reducing food miles.

Question 7 (a)

7 Eat more fish is one of the healthy eating tips.

(a) Identify **two** classifications of fish.

1

2

[2]

This question was well answered by many candidates. Common correct answers were 'oily' and 'white'. Common incorrect responses named a specific fish such as cod and salmon or stated tinned or non-oily.

Question 7 (b)

(b) Describe how to fillet a fish.

.....

.....

.....

.....

.....

..... **[5]**

Many candidates were able to describe one or two points from the mark scheme, where they had difficulties were in the last few stages of the process they were describing. Candidates appeared to lack experience and knowledge.

Exemplar 2

you chop the head off and tail off. & ~~peel the skin~~ Slice down the middle to get two halves. ~~get the scales off~~ file the scales off the fish. then put in oven or however its wanted to be cooked.

This is an example of a response which shows a lack of knowledge. The candidate gives vague responses such as slice down the middle and refers to cooking the fish. The preparation and cooking techniques section of the specification should be taught alongside practical work or with the use of visual resources to aid candidates understanding.

Question 7 (c)

(c) Fish is a source of high biological value (HBV) protein.

Identify **two** other sources of high biological value (HBV) protein.

1

2 [2]

Candidates answered this question well with a variety of correct sources identified.

Question 7 (d)

(d) Explain what **high biological value (HBV) protein** means.

.....

 [2]

Candidates tended to have a clear understanding and could explain the term correctly or had no understanding and gave vague answers such as it is good protein.

Question 7 (e)

(e) Complete the table below.

Identify **two** minerals found in fish and state **one** function of each in the diet.

Mineral found in fish	Function of mineral in the diet
1.	
2.	

[4]

Many candidates did not answer the question properly and offered a nutrient rather than a mineral. Protein, Vitamin D, Omega 3 were often stated. When a correct mineral was named, an appropriate function was not always correctly identified. Very few candidates had a clear knowledge of the minerals found in fish however when they did the function was often very precise and the wording technically correct.

Question 7 (f)

(f) Explain what **sustainable fish supply** means.

.....

.....

.....

..... [2]

(g) State **one** advantage of fish farming.

.....

..... [1]

(h) State **one** disadvantage of fish farming.

.....

..... [1]

Candidates found these questions challenging. There was a clear gap in knowledge evident in the answers given.

Question 8 (a)

8

- (a) Identify **two** different methods that can be used to preserve fruit or vegetables at home. Explain how each method preserves the fruit or vegetable.

Method 1

Explanation

.....

Method 2

Explanation

.....

[4]

Although many candidates could state the methods of preservation very few could correctly explain the effect of the method on bacteria. Some candidates did not read the question carefully and gave commercial preservation methods such as canning and freeze drying.

Question 8 (b)

- (b) State **two** advantages of preserving food at home.

1

.....

2

.....

[2]

A well answered question with a good range of answers given showing knowledge of this topic.

Question 9 (a)

9

(a) Explain **two** differences between saturated fats and unsaturated fats.

- 1
-
-
- 2
-
-

[4]

Many candidates demonstrated knowledge of this topic; some unfortunately got the differences the wrong way around.

Exemplar 3

- 1 ...saturated fats are solid at room temperature
...where as unsaturated fats are liquid at
...room temperature.
- 2 ...most saturated fats come from an animal
...source whereas unsaturated fats are from
...a plant source.

This candidate response makes four clear points showing knowledge of the topic.

Question 9 (b)

(b) Identify **two** saturated fats.

1

2

[2]

Many candidates could identify at least one; usually butter or lard.

Question 9 (c)

(c) Identify **one** unsaturated fat.

..... [1]

Many candidates could name a vegetable oil however some named a food or identified oil alone.

Question 9 (d)*

(d)* Discuss why it is important for adults to eat less fat and suggest ways adults can reduce their fat intake.

.....

.....

.....

.....

.....

..... [8]

Many candidates gave a well-balanced answer discussing both why and ways showing that they had read the question carefully. Many candidates demonstrated knowledge of the topic however very few gained marks in the top band due to a lack of ways being discussed in detail.

Question 10 (a)

10 Knowing the nutritional composition of food is important for many people.

(a) This is an example of the ingredients and nutritional content of a chicken soup.

Chicken soup

Ingredients
Water
Carrot
Onion
Chicken
Potato
Chicken stock
Milk

Nutrition	Per 100 g	Per portion
Energy	40 kcal 167 kj	120 kcal 501 kj
Fat	1.2 g	3.6 g
Carbohydrate	4.2 g	12.6 g
Of which sugars	1.2 g	3.6 g
Protein	2.5 g	7.5 g
Salt	0.5 g	1.5 g

Question 10 (b)

- (b) State **four** reasons why consumers may find the nutritional information and ingredients list found on food labels useful when planning meals.

1

2

3

4

[4]

Candidates demonstrated knowledge and a variety of responses were given from the mark scheme, however lots of repetition limited the marks given for some candidates.

Misconception



This question is asking for four reasons to be stated, all four reasons must be different. If the same point is stated more than once, then candidates can only be credited with the mark once. Some candidates stated can plan meals to suit vegans as one point and plan meals for vegetarians as another point whilst others stated know how much salt per portion and know how much fat per portion.

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