
GCSE FOOD PREPARATION AND NUTRITION

8585/W

Report on the Examination

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Introduction

This report explores all of the questions that were presented on this year's written examination for GCSE Food Preparation and Nutrition.

Advance information was provided for this year's written examination in light of the ongoing impact of the Covid-19 pandemic. The purpose of the advance information was to guide students with revision ahead of sitting the examination. Topics listed on the advance information have been identified as part of the question analysis in this report but centres are reminded that advance information indicated other topics would be assessed in the examination. It is worth noting that a considerable number of blank responses were seen in questions that covered topics from the advance information; this was unexpected.

Across Section A and Section B of the examination, a range of different question styles assess students against three assessment objectives:

- AO1: Demonstrate knowledge and 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.

It is important to note that there is no set style of question used to examine students against each assessment objective. It is a requirement to assess different aspects of nutrition, food, cooking and preparation through a range of question styles, including for AO4. Centres and students should therefore expect to see exam questions presented in different formats year-on-year.

This year's paper elicited a wide range of responses from students of all ability levels and proved to differentiate effectively. The demand of the paper was in line with previous examinations, and the structure saw questions presented in a clear and logical sequence. For example, questions were grouped by key themes so that sub-parts of each question were linked. The number of marks allocated to questions was similar to previous years, and sufficient space was provided for each question to limit the need for students to use additional paper.

Section A

As seen previously, Section A presented students with 20 multiple-choice questions, which covered a range of topics from the specification. The majority of students attempted all questions, and the style of questions enabled all students to achieve marks for this section. Responses from students show that appropriate distractors were selected for all of the questions. It was good practice to see students annotating the questions, with this demonstrating that they had spent the required amount of time working out the correct responses.

Some students did not answer the multiple-choice questions clearly, which impacted the number of marks they could be awarded. Centres are therefore advised to ensure students are fully aware of the correct way to identify chosen responses. Students' attention should be drawn to the guidance given at the start of Section A to help with this. It is important to note that if multiple responses are given by a student for a question, and it is not obvious which response they are choosing, a mark cannot be awarded. Students should ensure that one response is clearly marked for each multiple-choice question. Students should be advised against leaving any multiple-choice questions blank.

Question 1.1

This was a well-answered question with approximately 80% of students answering that the Eatwell Guide recommends we should drink 6-8 glasses of fluid each day. This question linked to the advance information.

Question 1.2

This question was successfully answered, with the majority of students correctly identifying that egg forms a foam when whisked with sugar.

Question 1.3

This was a more challenging question for students to answer; however, approximately 40% were able to identify that the function of vitamin B12 in the body is to make red blood cells.

Question 1.4

The majority of students correctly identified that energy balance is needed for our bodies to maintain a healthy weight. This question linked to the advance information.

Question 1.5

Approximately 80% of students identified that sustainable fishing means that species are protected. This question linked to the advance information.

Question 1.6

This was a well-answered question, with more than 80% of students recognising that the Eatwell Guide does not apply to children under 2 years old. This question linked to the advance information.

Question 1.7

Students found this question difficult to answer. Approximately one third of responses correctly identified that Vitamin C will be destroyed when boiling green vegetables. The low response highlights a need for teaching to categorise vitamins into fat-soluble and water-soluble, with these categories frequently revisited. This question linked to the advance information.

Question 1.8

This was a challenging question with less than 40% of students recognising that iodine deficiency causes an enlarged thyroid gland or goitre. This question discriminated well between lower and higher ability students.

Question 1.9

Approximately one third of students selected fructose as the correct answer. This question tested students on their high-level understanding of nutrition and therefore discriminated well between lower and higher ability students.

Question 1.10

This was a challenging question for students to answer, with the distractors requiring specific knowledge of chemical raising agents used within dishes. Approximately 40% of students correctly recognised that a chemical raising agent is used to make scones.

Question 1.11

Approximately half of students identified that the temperature for safely defrosting chicken is 0 to 5°C. It is advisable for the safe defrosting of meat products to be explicitly taught. This question linked to the advance information.

Question 1.12

This question received a range of responses from students with approximately 50% answering correctly. Clear understanding of the different types of milk was needed to recognise that pasteurised milk has the shortest shelf life when unopened. This question therefore discriminated well between lower and higher ability students.

Question 1.13

Approximately one third of students recognised that mozzarella cheese should be replaced to reduce the saturated fat content of the pasta salad. Centres should ensure that students are able to differentiate between ingredients that are sources of saturated fat and unsaturated fat.

Question 1.14

This question included subject specific terminology. A high level of subject knowledge was therefore required to enable students to correctly identify that lecithin prevents mayonnaise from separating. One third of students answered the question correctly demonstrating that this was one of the more demanding questions on the paper.

Question 1.15

The majority of students correctly identified that organic vegetables are grown without the use of chemical fertilisers.

Question 1.16

Approximately 50% of students correctly recognised that creaming butter and sugar together when making cake results in aeration. Aeration was not a topic that was specifically identified on the advance information, which may explain why this question was not answered correctly by a high number of students. This question also demonstrates the need to link food science with practical work completed in lessons and as part of the NEA.

Question 1.17

This was a well-answered question with approximately 80% of students able to identify that mould growth is used in the production of cheese.

Question 1.18

Just over 50% of students recognised that Hindus do not eat beef for religious reasons.

Question 1.19

This proved to be an accessible question for students to answer, with over 90% selecting China as the country that traditionally uses a wok when cooking.

Question 1.20

This proved to be a challenging question to conclude Section A, with approximately one third of students able to identify that the triangle sensory testing method identifies the 'odd one out' in a range of samples. It is possible that the removal of NEA1 led some teachers to spend less time than normal teaching about sensory testing methods – this might explain why the success rate for this question was lower than had been expected.

Section B

In Section B, students were required to write responses to a range of questions that carried between two and 12 marks. Students' responses varied significantly in terms of length, detail and the level of knowledge and understanding demonstrated. Overall, questions were clearly worded to elicit responses that were in line with the mark scheme. However, there were a number of blank responses throughout the marking process, and a limited number of responses were awarded full marks. This suggests the limited use of the advance information by some centres, as mentioned previously. However, it is also likely to be representative of the post-covid era with students impacted by a reduction in face-to-face teaching time and changes to the delivery of the specification to accommodate control measures that were in place within centres.

Question 2.1

This was an accessible question that was successfully answered, with over 80% of students achieving full marks. When two marks were not achieved, students selected two ingredients with best before dates, limiting the total that could be awarded to one mark. Other students identified an ingredient for each type of expiry date but recorded them the wrong way around. For example, chicken was recorded as having a best before date. Overall, this was a widely accessible question to open Section B. It also linked to the advance information.

Question 2.2

This question was well-attempted with few blank responses. Less than 5% of students achieved zero marks, which demonstrates good knowledge and understanding of buying and storing food – a topic that was identified on the advance information.

There were a limited number of students who achieved full marks (approximately 17%). This question differentiated effectively, with more able students demonstrating the specific knowledge needed to access full marks. Approximately one third of students achieved five marks, with many losing one mark for not specifying that contents of canned food need to be dispensed into airtight containers before being refrigerated. This is knowledge that centres are advised to reinforce with students when they are learning about food storage.

In some instances, students limited how many marks they could be awarded by repeating their answers. However, whilst the question stipulated 'Do not repeat your answers', students were credited for stating 'fridge' for both the raw chicken and leftover coconut milk in order to reflect student responses.

Question 2.3

Although students may have been more familiar with a data-based question for 12 marks, this question proved accessible to students. With a focus on food safety principles when preparing, cooking and serving food, the question received a broad range of responses, with many students able to draw on routines they would have followed in practical lessons within school. There was also good association with the production of the time plan for Section C of the NEA, which required students to address the food safety principles that they would follow when producing their two final dishes.

The majority of students (approximately 43%) were placed in the middle mark band. Many of these students could not be awarded additional marks because they did not cover all three elements of the question – prepare, cook and serve. A number of students also presented answers which did not have a balance of analytical and evaluative points. These are key teaching points that should be reinforced by centres when practising examination questions. As part of this, students should also be encouraged to utilise the detailed mark scheme to assist them with planning thorough responses.

It was pleasing to see students demonstrating very good knowledge and understanding of personal hygiene in their responses to this question. Higher ability students were also able to identify key temperatures, such as the core temperature of cooked food and the temperature of the danger zone. Some students identified specific food poisoning bacteria; however, this was often limited to naming salmonella.

Students who were placed in the 1-4 mark band frequently focused their responses solely on analysis. Centres are therefore advised to encourage students to read questions carefully to ensure all elements are responded to, with clear points communicated for both analysis and evaluation. This can be achieved by annotating students' work to show where analysis and evaluation points have been credited when practising examination questions.

Approximately 5% of students did not attempt this question or scored zero marks, which is disappointing given that food safety principles when preparing, cooking and serving food was a topic identified on the advance information.

Question 3.1

Factors affecting food choice was a topic that was identified on the advance information. The style of this question enabled knowledge of factors influencing food choice to be tested clearly and overtly. The question was well-attempted by students, with approximately 40% achieving full marks. Almost 70% of students scored between four and six marks.

Where students received fewer marks, some focused on explaining the nutritional needs of the given life stages rather than factors influencing their food choice. This demonstrates misinterpretation of the question. It was interesting to read the gender assumptions that were made for the consumer groups.

Repetition of responses was limited, showing that students responded to instructions provided as

part of the question.

Question 3.2

Question 3.2 proved to be an accessible question, which generated good responses from the majority of students. Approximately 83% of students received credit for this question.

Where marks were not awarded it was because students had not demonstrated a clear understanding of the term '5-a-day'. This was disappointing as 'current guidelines for a healthy diet' was included in the advance information.

When learning about 5-a-day, centres are encouraged to ensure that students are aware that the guideline encompasses both fruit and vegetables. Ensuring students understand the features and benefits of 5-a-day would also be beneficial. This would have helped a higher proportion of students to achieve full marks for this question.

Question 3.3

This question was attempted well, with the majority of students writing a response. It discriminated well between lower and higher ability students. It also linked to the advance information.

Approximately 16% of students were placed in the top mark band. These students were able to accurately identify and describe a number of diet-related health conditions that are linked to fat, sugar and salt content, all of which are found in abundance in ready meals and takeaways. Commonly named conditions included obesity, coronary heart disease and hypertension.

There was a relatively equal distribution of students in the middle and bottom mark bands. In general, responses from these students contained a limited number of points, which restricted access to the higher mark band. For example, students may have only discussed the impact of excess fat / saturated fat consumption in the diet.

When preparing for this style of question, students are encouraged to practise answering questions that require extended writing with a clear chain of reasoning.

Question 3.4

Question 3.4 presented a greater level of challenge for students, despite linking to the advance information.

Where marks were awarded for this question, the biggest proportion of students scored in the bottom mark band (approximately 42%). This was due to students explaining healthy eating guidelines superficially, at times without naming any. The planning element of the question was also omitted from a vast number of responses. Students could have secured more marks linked to planning if they had provided specific food examples to support the points they were making.

It is important to note that a number of students referred to the Eatwell Plate rather than the Eatwell Guide in their responses. Centres are therefore advised to ensure that students are learning about current healthy eating guidelines rather than ones that have been replaced. Centres are also encouraged to factor in learning around adapting meals to satisfy healthy eating guidelines. This could be achieved through theory and practical work.

Question 3.5

This proved to be a challenging question suggesting that bone health may be one of the diet-related health conditions covered less thoroughly by centres compared with other conditions, such as obesity.

Students were able to successfully identify the role of calcium in bone health, along with food sources. A number of students were also able to link the absorption of calcium to vitamin D. However, on the whole, responses to this question were superficial, demonstrating limited understanding of osteoporosis and factors contributing to bone health.

Question 4.1

Although dextrinisation was an area of food science that was identified on the advance information, approximately 50% of students scored zero marks or failed to attempt the question. Of the students who demonstrated accurate knowledge and understanding, approximately 30% achieved full marks, with a number of these students making additional and credible points. The majority of students who were credited for this question referred to the browning of the pizza crust following the application of dry-heat.

In general, student knowledge of food science remains a weaker area of the specification and this would be a useful focus for centres when planning schemes of learning moving forward. Greater focus could be placed on exploring the working characteristics of ingredients to enable students to link food science with practical work completed. The removal of NEA Task 1 for the 2022 series could explain why there may have been a reduced focus on this element of the specification.

Question 4.2

Of the students who attempted to this question, many correctly referred to the rubbing-in method and the coating of flour particles with fat. It would be beneficial for centres to clarify that this process helps to form a waterproof coating to limit the absorption of water and the subsequent development of gluten to aid students' in further developing their responses. This would demonstrate a higher level of scientific knowledge and understanding. These additional points were recognised by very few students. Some students also confused the purpose of rubbing-in and wrote about the flour coating the fat rather than the fat coating the flour.

Question 4.3

This question generated mixed responses from students. Some responses were excellent, demonstrating very good knowledge and understanding of the process of gelatinisation, with reference to the three key temperatures (60°C, 80°C and 100°C) and an explanation of what happens at each stage. However, approximately 41% of students scored zero marks or failed to attempt the question, despite it being specifically identified on the advance information. Some of the students who did attempt the question formed poor quality responses and demonstrated limited knowledge and understanding of gelatinisation. Some students thought the process involved gelatine. Many students will have made a starch-based sauce as part of their NEA, which reiterates that students are not always able to link their practical understanding of how ingredients work with their theoretical understanding.

When learning about gelatinisation, centres are advised to ensure students are aware of the key stages involved in the process, along with the three key temperatures. The mark scheme content

for this question can be used to assist with this. It would also be advisable to explore how the process of gelatinisation is seen in a range of different sauces. A number of students demonstrated an understanding of a roux sauce; however, it would be beneficial to explore the process of gelatinisation in roux and blended sauces (e.g. custard) to expand students' knowledge and understanding.

Question 4.4

This question received a range of responses from students. In general, it was not as well-answered as anticipated, with students failing to identify a range of different ways to increase the fibre content of the two specified dishes.

Popular answers included adding vegetables to the pizza toppings and using wholemeal flour for the pizza base. The use of wholemeal flour was also popular for the apple pie, as was leaving the skins on the apples for the filling. Some students limited the number of marks they could achieve by repeating their answers. This was despite the question reminding students not to do this.

Centres are advised to explore how recipes can be modified to improve their nutritional content on a regular basis so that students are able to draw on a wider range of ideas.

Question 4.5

The majority of students attempted this question, probably because they are now very familiar with this question style. In general, the question was understood; however, many students were vague in their responses, which limited the number of marks that could be awarded.

When providing reasons for problems occurring in a dish, students should be encouraged to explain fully the points being made. For example, rather than saying 'dough is too sticky' to explain why the pastry dough is difficult to roll, students should validate their response by saying 'dough is too sticky due to too much water being added'.

A general misconception in responses was that pastry should be kneaded. Centres are therefore encouraged to remind students of the difference between the processes involved when making pastry and bread dough.

Question 5

Question 5 focused on an area of the specification that has not been tested previously – jam making. Students struggled to achieve many marks on this question, highlighting limited knowledge of the functional and chemical properties of jam making ingredients. However, a good proportion of students were able to achieve one or two marks (approximately 30% and 25%, respectively) by recognising that plums and lemon enhance the flavour profile of jam with their sweet and sour properties. There was limited reference to the role of pectin.

This question linked to the advance information, which stated 'Primary and Secondary stages of processing and production'.

Question 6.1

More than two-thirds of students achieved full marks for this question, with chicken and eggs featuring as the most common answers. A number of students identified 'meat', which was not

credited due to it being too vague. Centres are advised to encourage students to be specific in all responses to help maximise the number of marks they are able to secure.

Question 6.2

Although there was some misinterpretation of this question, with students confusing free-range farming with organic and, at times, Fairtrade, this question was well-attempted. Approximately 20% of students achieved full marks, with just over a quarter of students scoring three out of four.

Overall, the topic for Question 6 enabled the end of the written examination to be accessible to students. It is important to note that the written examination for GCSE Food Preparation and Nutrition does not increase with difficulty as students progress through the paper.

Concluding Comments

Centres and students should be praised for the outcomes achieved for this written examination. Overall, performances of students were comparable with those seen in the 2019 examination series, which is both encouraging and praiseworthy given the disruption that this cohort of students has experienced over the course of the past two years.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.