

GCSE
FOOD PREPARATION AND
NUTRITION

8585/W

Report on the Examination

8585

June 2019

Version: 1.0

Further copies of this Report are available from aqa.org.uk

Copyright © 2019 AQA and its licensors. All rights reserved.

AQA retains the copyright on all its publications. However, registered schools/colleges for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to schools/colleges to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Introduction

Centres are to be congratulated on the quality of their students' work. For Section A, the multiple-choice questions were accessible to every student, allowing all students to gain some marks. Section B of the paper tests knowledge and understanding across the whole subject content, as well as skills of analysis and evaluation in questions 3.1 and 5.2. It was clear that teachers had covered the subject content well within their schemes of learning, making the paper accessible to a large number of students. The majority of students attempted all questions on the paper; even those requiring an extended response were mostly attempted by students of all abilities. At all levels of ability students used specialist terminology appropriately with a high level of technical language used in the most effective answers. Most students used the information in the question to guide them in writing relevant and credible responses.

Section A – Multiple choice questions

1.1

Around 95% of students correctly chose pasta as a good source of energy from carbohydrates.

1.2

Approximately 70% of students correctly chose proteins as the nutrient made up from amino acids.

1.3

Only around 54% of students accurately identified nuts as a food which is a good source of low biological protein foods.

1.4

Around 93% of students identified lactose as the sugar in cow's milk.

1.5

About 73% of students correctly chose removal of waste for why the body needs dietary fibre.

1.6

Around 85% of students correctly identified stir frying as a quick method of cooking.

1.7

Knowledge of food security was less well known with over half of the students correctly identifying this as the definition of a reliable supply of safe, nutritious and affordable food.

1.8

Around 72% of students were able to identify dextrinisation as the term used for the effect of dry heat on starch.

1.9

Only slightly over a quarter of students correctly chose doughnuts as the food which uses a biological raising agent.

1.10

Plasticity was identified by just over half the of students as the term used to describe the softening, shaping or spreading of fats.

1.11

Around 60% of students correctly identified campylobacter as the food poisoning bacteria which is commonly found in chicken.

1.12

Only around 29% of students correctly chose tomatoes as the food which can show signs of food spoilage by yeasts.

1.13

Knowledge of microorganisms used in the production of food was well known with about 71% of students correctly identifying cheese.

1.14

About 67% of students could correctly identify blue as the correct coloured chopping board for preparing raw fish.

1.15

Only slightly over half of the students correctly identified rickets as being the deficiency of vitamin D.

1.16

Around 72% of students correctly identified air as the raising agent used in meringues.

1.17

Knowledge of sauces was not so well known with around 53% correctly identifying hollandaise sauce as an emulsion.

1.18

Gelatinisation was correctly identified by about 73% of students as the process where starch granules swell and thicken a sauce.

1.19

Only around 40% of students correctly identified that the role of iodine in the diet is to control the metabolic rate.

1.20

Approximately 65% of students correctly chose proteins as the nutrient which makes the biological catalyst known as enzymes.

Section B

The written examination uses different types of questions (AO1, AO2 and AO4) and requires different types and levels of responses. It is important that all centres are familiar with the requirements of each type of question to help students gain marks in each area.

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

Question 2.1: AO1

This was a well answered question which required students to recall their knowledge of why food is cooked. Many students gained full marks by linking their response to developing the sensory qualities of food, making food safe to eat and to tenderise and soften food such as meat and vegetables.

Question 2.2: AO1

Excellent responses were given to this question. Students showed very good knowledge of factors which influence food choice including income, availability of food, culinary skills and time available to prepare and cook food. Students were able to link their knowledge and understanding demonstrated through the NEA2: Food Preparation to aid the answering of this question.

Question 2.3: AO2

This was generally well answered. Students were asked to explain how cooking methods affect the nutritional and sensory properties of potatoes. The question differentiated well with the best responses gaining marks for both nutritional and sensory changes, but other students struggled with addressing the nutritional changes. However, most students gained some marks for describing the sensory changes.

Students should be encouraged not to repeat answers for different cooking methods when completing a table. Students did not always address colour, flavour and texture when recognising the sensory changes.

The most successful responses correctly identified the B group and vitamin C as the water-soluble vitamins likely to be destroyed by all cooking methods. Some students correctly explained how minerals can leach into cooking water and how the fibre content is increased when baked, due to the skin being consumed. For shallow frying, more effective responses correctly explained that fat levels would increase when the potatoes were fried. A good range of sensory changes were explained with many students achieving full marks for this section.

Question 3.1: AO4

This question differentiated well. It was a challenging AO4 question which required students to analyse and carry out evaluation. Two meals were presented; students had to assess the suitability of each meal and then evaluate the healthier choice. Detailed information was presented in 2 tables: 'Table 1 – Ingredients and recommended intakes of nutrients' and 'Table 2 – The % energy provided by the macro nutrients'. The more comprehensive answers were demonstrated when

students were able to analyse information from both tables and recommend the suitability of a 25-year-old active male (Bradley). Some responses were excellent; these responses made full use of the information presented and systematically worked through the figures to correctly identify meal A as the healthier choice. It would be good practice to teach students how to answer a data response question in class. In addition to this, some students went on to justify reasons why meal B could also be beneficial to Bradley, for example correctly justifying meal B for its higher calcium and vitamin B1 content. Fewer were able to analyse table 2, but more effective responses gave the correct % of energy from nutrients, being 50% for carbohydrate, 35% (or less) from fat and 15% from protein sources. They then compared these to each meal.

Less successful responses listed the nutrients in the meals but did not evaluate their use in the body or to Bradley in particular. Often these responses were too vague to access marks above the lower band. When answering an AO4 question it is essential that students are analysing the information and then are able to evaluate the content. To access the higher mark bands there must be a balance of analysis and evaluation. This was not always evident in student responses.

Question 3.2: AO1

This question was well answered by the majority of students. Most students knew three functions of water in the body. The most common responses were correctly stated as to prevent dehydration, for the digestion of food, to prevent constipation and to regulate body temperature.

Question 3.3: AO1

This AO1 question tested the recall of the functions of micronutrients. It differentiated well, with some students gaining full marks. Many achieved half marks. Most students knew calcium is needed for strong bones and teeth and that fluoride helps to prevent tooth decay. Vitamins A, B1 and C were often confused with each other. Some students thought vitamin K was the mineral potassium (its chemical symbol). It is important that all the vitamins and minerals in the specification are covered in the scheme of learning. Students were aware of the more familiar micro nutrients but had limited knowledge of the less familiar ones.

Question 3.4: AO2

Some students found this question very challenging. This question required students to describe the process of denaturation and coagulation when cooking eggs. The most effective responses were detailed and accurate and this question showed good differentiation. There were some excellent responses with accurate diagrams. The majority of students attempted this question, but there were several blank scripts where no attempt was made to answer the question. It is important that students can relate the knowledge they gain from cooking in the classroom to the food science section 3.3 of the specification.

Excellent use of key subject terminology was evidenced in the more effective responses when answering this question.

Question 3.5: AO1

This AO2 question required students to describe the controlled conditions when carrying out sensory testing.

Although most students attempted this question, several did not. There was some confusion over preparing and cooking food samples for sensory testing rather than the actual controlled conditions

needed when carrying out the testing. Most knew that water was needed to cleanse the palate and that taste panellists should not speak to each other during the tests. Sensory testing is a key element of NEA1: The Food Investigation, when controlled conditions for testing are carried out. Students did not always relate their response to the practical testing they had carried out in the completion of their NEA.

Question 3.6: AO2

This AO2 question required students to explain fully how the process of enzymic browning takes place. More effective responses gave detailed answers which included key words such as protein, catalyst, oxygen/air, oxidation, denaturation, acids, lemon juice and blanching. Less successful answers were very brief, but most managed to show a basic knowledge and understanding in order to gain marks in the lower band. To gain full marks students need to explain the process of enzymic browning and then address how this can be prevented.

Question 3.7: AO2

Generally, this question was satisfactorily answered. Students could gain some credit in explaining why nutritional information was put on food labels. Many knew that nutritional labelling is now the law. However, too many students did not read the question carefully and wrongly gave information on allergies and intolerances relating to ingredients and not specifically to the nutritional information on the label.

Question 4.1: AO2

This question required students to identify and prevent problems caused during the preparation of fresh pasta and an all-in-one Victoria sandwich cake.

It was accessible to all abilities and virtually all students attempted this and gained at least one mark. Those students who were familiar with making fresh pasta and with the method of making a cake by the all-in-one method were able to give accurate causes of the problem and how to prevent them from occurring.

The most common problems identified by students for pasta were too much flour and insufficient kneading, with the prevention being to weigh all ingredients out carefully and knead the pasta dough for longer.

The most common problems identified for the all-in-one Victoria sandwich cake were no raising agent has been added and insufficient whisking/beating time. The prevention was to add baking powder or self-raising flour and to whisk for longer to aerate the cake mixture. This question related to the food science section of the specification and it was pleasing to see some students using scientific terminology within their answers.

Question 4.2: AO2

This question related to the food provenance section of the specification. Most students were able to answer this question and had a good knowledge of the prevention of food waste in shops and supermarkets. A considerable number gained at least 2 out of the 4 marks. Lots of answers referred to donating waste food to food banks/charities, rotating stock, selling foods close to use-by/best before dates at a reduced price and selling imperfect fruit and vegetables. Some students misread the question and referred to food waste in the home or having a compost heap at home.

Question 5.1: AO2

Many students found this question on fortifying food challenging. This question addressed technological developments associated with better health and food production. There was a higher proportion of students not attempting this question compared to the other questions on the paper. It was an effective question for differentiation as more effective responses with examples did gain full marks, but these were in the minority.

The main examples of fortified foods given included:

- breakfast cereals - B group vitamins and iron
- white flour - calcium, iron and B vitamins
- vegan products – eg vitamin B12 and calcium in soya milk.

Question 5.2: AO4

This question required students to analyse and carry out evaluation. There was good knowledge about the reasons for the increase in type 2 diabetes, but less was known about its impact on health.

The most frequent lifestyle factors analysed by students were an unhealthy diet, eating more ready meals and takeaways, increased consumption of high sugar drinks, lack of exercise, sedentary lifestyle, eating insufficient fruit and vegetables and a lack of dietary fibre.

The impact of health was not so well analysed and evaluated. However, more effective answers referred to high blood sugar levels, vision problems, obesity, cardiovascular problems and the risk of infections, amputations and even death.

Supplementary Comments

Quality of written communication was very good for most students; however, it is important to reinforce to students the importance of clear writing to allow examiners to credit responses.

Careful reading of each question is vital for students to access the full mark range. Knowing the meaning of the command words, eg 'describe', 'explain', 'analyse', is an essential part of exam preparation and should be taught and then reinforced in the lead up to the examination.

It was evident the extra space allowed on the script for responses this year reduced the need for additional sheets of paper to be attached.

Mark Ranges and Award of Grades

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

Use of statistics

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.