



Pearson

Examiner's Report Principal Examiner Feedback

Summer 2018

Pearson Edexcel GCE Advanced Level
In D&T Food Technology (6FT03/01)

edexcel 

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2018

Publications Code 6FT03_01_1806_ER

All the material in this publication is copyright

© Pearson Education Ltd 2018

Introduction

The focus of the 6FT03 paper is to examine candidates on the knowledge they have developed throughout the course of this qualification on a range of food commodities, aspects of nutrition, product development and food innovation. Candidates are required to have a comprehensive knowledge of the main food commodities, their composition, basic processing and typical spoilage patterns.

A sound knowledge of nutrition and its influence on the diet, contemporary lifestyle issues and new product development is particularly important for food technologists. Similarly, consumer behaviour, demographics, modern lifestyles, cultural changes and sustainable issues have an influence on new product development. It is also important for candidates to be aware of the influence of new technologies and materials on the development of new food products.

The coverage of this paper effectively tested the candidates' knowledge and understanding of the topic areas, and provided opportunities to apply this knowledge. The 'ramped' nature of the exam paper and variety of question styles and command words promoted accessibility to candidates of all ability levels. Application of knowledge and understanding within the subject area was evident, with stretch and challenge opportunities for higher ability candidates. Marks were scored across all areas of the paper, with effective differentiation across the paper.

The purpose of this report is to share with centres general examples of the types of responses where candidates answered well, and also to consider areas where candidates did less well, especially regarding common mistakes which caused candidates to lose marks. It is suggested that this report is read with reference to, or in conjunction with, the 2018 mark scheme for this paper.

Question 1(a)

This question derives from the commodities section of the unit. A recall question requiring candidates to identify the properties of protein in eggs which enable eggs to function in a wide variety of different ways in food preparation. Most candidates achieved full marks with a wide range of functions identified and often described. Many gave examples to illustrate their answers. It was a good start to the paper with many showing clear understanding of the question. It was pleasing to see a great variety of correct responses, with the majority focusing on coagulation or foaming or browning with specific reference to the Maillard reaction.

Where candidates did less well, the response would show the same property twice with a different function, e.g. binding and thickening as two responses, both rely on the one property, coagulation.

Question 1(b)

The best answers showed a development of the response to explain one change occurring in eggs during storage, which affects the quality of the egg. Many were able to achieve two of the 3 marks available.

Question 1(c)

This question required knowledge of processing whole egg(s), and many responses showed clear recall and understanding of the process. Where candidates did less well, they either had no knowledge of the process, or failed to read the question properly; a number of responses outlined freeze-drying of egg or described the process of drying egg. Good responses evidenced understanding and focused on the question.

Question 2

Product development with the concept of marketing plans at different stages of the product life cycle was the focus for this question. Many excellent responses correctly identified the marketing plans for each stage. Many candidates used examples to illustrate their points which demonstrated clear understanding. Where candidates did less well, they did not read the question properly and jumped to the assumption that it was asking them to describe that life cycle stage rather than the marketing plan. Such responses could not achieve high marks.

The best responses were for the 'decline' stage with most able to identify at least two marketing plans in place at this stage of the product life cycle.

Question 3

This question derives from the nutrition section of the 6FT03 specification, specifically focusing on the contemporary issue of obesity. Obesity is a diet related disease and Food Technology candidates should have a clear awareness of the implications of this illness not just for the individual but also for society as a whole.

Question 3(a)

This was a very specific question with the expected response requiring a clear definition of obesity rather than simply stating that a person is overweight. A reference to BMI was expected. There was a good range of responses for this question with many being able to differentiate the different BMI levels for overweight, obese, seriously or morbidly obese. Having a BMI of 25 – 30 is overweight with obesity defined as having a BMI over 30. Many made reference to body fat, to the adverse impact on health. Lower level responses tended to refer to being overweight, without any reference to obesity. There were many references to energy balance but with no reference back to the question, or descriptions of what an overweight person might eat or suggested ways of reducing obesity, which although interesting and important was not the focus of this question.

Question 3(b)

It was very pleasing to see several excellent responses, the best responses pointed out the impact on both short term and long term health, whilst focusing on costs to society. Less able candidates' responses tended to write irrelevantly around the subject away from the focus of the question, such as explanations for the factors leading to obesity or providing suggestions for reducing obesity.

Question 4

This question was from the commodities section of the specification, looking at both the composition of wheat grains and linking this into processing them for different uses.

Good responses showed excellent understanding to discuss how the composition of hard wheat and soft wheat are used in food production. There were several clear responses focusing on protein levels in the different wheats, and why this makes each type suitable for different products such as bread or biscuits. It was good to see high level understanding, for instance as to why the composition of durum wheat makes it so useful for pasta flour and for the process of pasta making. Candidates who did less well answered by writing about different types of flour, rather than focusing on the different types of wheat. For instance, there was much description of white flour as opposed to wholemeal, or plain or self-raising. Some candidates spent time writing about other cereal grains such as rye or barley and their use. This is not relevant to a question on wheat.

Question 5

This question focused on fruit as a commodity and its use in the food industry as both fruit juice and as wine. This question was therefore able to draw from different areas of the specification.

Question 5(a)

Candidates were required to provide responses explaining the changes which take place during ripening in climacteric fruit. Where candidates answered well, clear explanations of colour, texture and flavour changes were provided. Most candidates were able to achieve at least 3 marks on this question. Where candidates did less well they simply stated the changes which occur, rather than explaining these changes. Candidates who focused on changes as fruit decays also were not able to answer well, as the focus of the question was on changes during ripening rather than this later spoilage stage.

Question 5(b)

This question required knowledge of the process of commercial juice extraction. There were several excellent responses with the best able to identify the use of pectolytic enzymes and their function, as well as outlining the process. Where candidates did less well, they simply guessed the process and were not able to give specific knowledge.

Question 5(c)

Candidates were required to be able to identify differences in the production of red and white wine. Most were able to achieve 3 or more of the 4 marks available.

Question 6

This question focused on macro-nutrients. Food Technology candidates are expected to have a good understanding of the contribution of nutrients to the diet.

Question 6(a)

This question had many very good responses. It was good to see so many candidates able to identify the specific energy contribution of fat. Where candidates did well, there was a wide range of functions discussed in detail.

Question 6(b)

This question allowed for candidates to show high level knowledge of the quality of protein. Very good responses were able to clearly show the link between amino acids and protein quality, with many examples used to illustrate points. Candidates had a good awareness of High Biological Value proteins, Low Biological Value proteins and the complementary value of proteins in combining LBV proteins to get HBV protein. Where candidates did less well, they were not able to develop points or demonstrate high level knowledge.

Question 7

This question derives from the product development and food innovation section, with the specific focus being on products of biotechnology. It allowed the opportunity for candidates to utilise extended writing, and there were many excellent responses with candidates applying their knowledge well. Technical language has been used appropriately. Such responses acquired the marks available. Many candidates were able to achieve at least 6 marks from this question with many of the best responses achieving full marks. Where candidates answered well they identified both traditional food products, and newer food products resulting from biotechnology, such as cheese, bread or wine or beer or, for new products, mycoprotein, xanthan gum, chymosin, probiotics etc. and explain the influence of biotechnology in relation to these products. Candidates took the opportunity to give detailed but focused responses. Where candidates did less well, there was less of a focus and responses were too broad an interpretation of what biotechnology is. Candidates in these cases tended to write about any new food material product whether it was related to the topic or not. There were many irrelevant references to encapsulation of flavours or of modified starch. A number of candidates, although achieving marks by identifying GM foods, decided to write about the benefits and concerns of GM food production. Poorer responses thus moved away from the focus of the question and tended to produce less accurate and focused responses. Candidates should have the confidence to stick to the focus of the question, rather than try to bring in anything with a tenuous link in the hope of marks. Good responses are always focused and selective.

Paper Summary

To sum up, successful candidates were able to demonstrate and apply high level knowledge and understanding in their responses to the questions. It was very pleasing to witness the depth of technical detail included in responses to questions which required explanation and discussion. There were several good responses to all questions and it was very pleasing to witness that the majority of candidates attempted all questions.

It would be useful for all centres to ensure the Subject Content Guide 6FT03 is referred to by both teachers and candidates. This can be accessed on the Edexcel website, on the GCE Food Technology page, under Teacher Support Materials.