

Examiners' Report
June 2013

GCSE Design and Technology
Food Technology 5FT02 01

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Introduction

In the fourth year of this examination, centres are continuing to make good progress with their teaching and learning activities in Food Technology. Familiarity of course requirements and good quality support materials have combined to help raise standards in many centres. The delivery of knowledge, understanding and skills for a wide range of ingredients, components, materials and processes in the Food Technology course continues to show improvements in student outcomes in all areas of the specification, through the use of primary and secondary foods in food preparation, processing and preservation, nutrition and health issues, product analysis and product manufacture topics in both domestic and industrial areas of study. There were a range of levels of outcome for candidates, as to be expected with the mixed cohort. This paper contained a broad and varied distribution of marks across the questions, which achieved a good balance of recall, selection, application and communication of knowledge and understanding in Food Technology, as well as product analysis and evaluation, through short and extended writing activities, and communication of ideas through the design question.

The coverage of the subject content was thorough and varied, effectively testing the candidate's technical knowledge and understanding of Food Technology. The 'ramped' nature of the exam paper and variety of questions styles and command words promoted accessibility to candidates of all ability levels. Progression and application of knowledge and understanding within the subject area was evident, promoting stretch and challenge opportunities for higher ability candidates.

Marks were scored evenly across all areas of the paper, with effective differentiation across the paper. Levels of literacy showed a marked improvement, with good use of subject specific terminology and improvements in planning and writing the extended writing answers. Handwriting continues to be variable, with some answers illegible as a result, some candidates lost marks through carelessness or lack of thought and effort. It is essential that candidates are made aware of the necessity to write neatly with a clear and legible black (hand writing) pen.

The multiple choice questions and short answer questions were well received. Short, concise answers tended to fair better than lengthy responses that were too wordy or went beyond the space for answers. Many candidates managed to write at considerable length in this time for the extended writing tasks. However, some of the answers were not focussed on the question. Relevance rather than length is the key to high marks. Centres should note that the amount of space provided in the booklet for answers, is more than we would expect any answer to take, and not a recommendation of the amount candidates should write.

Centres need to be aware of the necessity to prepare candidates for this exam by ensuring that they have a full understanding of the requirements of different question types: name, state, give, describe, outline, evaluate and explain. Often, candidates had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant linked examples or reasoning. Simply adding a connective 'because'; 'so that'; is often the prompting that a student requires to provide a more technical or developed answer which will be linked to the initial statement.

Additionally, some of the technical questions relating to food products and nutritional understanding were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks. The design question was well received, and significant improvements have been seen with the quality of sketched and written communication by candidates. Additionally, the extended writing answers were much better organised, with good planning and use of terminology presented by candidates.

Question 11 (a) (1)

Good introductory question and this was answered very well by most candidates, identifying correctly weighing or measuring scales. There were quite a few candidates who incorrectly labelled 'scales' and were unable to secure a mark for this simplistic statement.

	weighing scales (1)	To weigh food/ingredients
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ResultsPlus
Examiner Comments

An accurate answer for one mark.



ResultsPlus
Examiner Tip

Full technical name secures 1 mark.

	manual weighing Scales. (1)	To weigh food/ingredients
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ResultsPlus
Examiner Comments

1 mark secured with accurate response.

Question 11 (a) (2)

95% of candidates achieved one mark for correctly identifying the correct use of scissors in food preparation, with the most popular answers focussing on cutting food, opening packaging or reducing the size of a food item.

	Scissors	To cut up a baking sheet and fruits or vegetables (1)
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ResultsPlus Examiner Comments

Accurate response linked to food preparation and use achieves 1 mark. This tended to be the most popular style of answer from candidates.

Question 11 (a) (3)

76% of candidates correctly identified spatula as the correct answer. Incorrect answers tended to focus on palette knives or lifting equipment such as a fish or cake slice.

	Spatula	To mix, spread or lift food
	(1)	



ResultsPlus
Examiner Comments

Good answer, spelling is incorrect.

1 mark

	Spatula.	To mix, spread or lift food
	(1)	



ResultsPlus
Examiner Comments

Correct answer. Many candidates incorrectly labelled this item a fish or cake slice, and others thought it incorrectly was a wooden spoon.

Question 11 (b) (i)

This question was well answered by the majority of candidates. The main error occurred where the stem of the question was repeated in the answer.

(b) Fats and oils are used in food preparation.

(i) Name **one** type of fat. (1)

Lard



ResultsPlus
Examiner Comments

Correct named type of fat awarded 1 mark.

(b) Fats and oils are used in food preparation.

(i) Name **one** type of fat. (1)

Butter



ResultsPlus
Examiner Comments

Correct answer secures 1 mark. A number of candidates confused structure of fat with types of fat, and this is an important area for centres to develop further.

Question 11 (b) (ii)

This question was well answered by the majority of candidates. The main error occurred where the stem of the question was repeated in the answer.

(ii) Name **one** type of oil. (1)

sunflower oil

(iii) Describe the main difference between a fat and an oil



ResultsPlus
Examiner Comments

High correct response rate from candidates for this question.

(ii) Name **one** type of oil. (1)

vegetable oil

(iii) Describe the main difference between a fat and an oil



ResultsPlus
Examiner Comments

A good range of named oils were written by candidates across the cohort, with the most popular being olive, vegetable, sunflower, rape and nut oils.

Question 11 (b) (iii)

The working characteristics of ingredients are integral to food preparation and this question required a description of one difference between a fat and oil. 68% of candidates could identify the liquid/ solid state linked to room temperature. There were also many good responses linked to source and origin.

(iii) Describe the main difference between a fat and an oil. (2)

Fat is usually a solid at room temperature whereas oil is usually a liquid at room temperature



ResultsPlus
Examiner Comments

Excellent descriptive answer secures two marks.

(iii) Describe the main difference between a fat and an oil. (2)

The main difference between a fat and an oil is the different states at which they are at. A fat is solid at room temperature. An oil is liquid at room temperature.



ResultsPlus
Examiner Comments

A well written answer with good description. 2 marks

The majority of candidates provided the correct physical differences between fat and oil. Some responses focused on the effect of fat in the body or cooking options.

Question 11 (b) (iv)

Primary and secondary foods will be used throughout practical work and it is an opportunity to consider how they deteriorate during storage. Few candidates knew about the deterioration process of fats and this was very badly answered, with very few candidates scoring 1 mark for their answer.

(iv) During prolonged storage, fats and oils will deteriorate and go off.
State the name of this deterioration process. (1)

As the product getting mouldy.

the bacteria grow and it becomes



ResultsPlus Examiner Comments

This answer represented most of the responses seen by examiners, and was incorrect.

(iv) During prolonged storage, fats and oils will deteriorate and go off.
State the name of this deterioration process. (1)

spoiling



ResultsPlus Examiner Comments

Incorrect answer. This is an area that requires some corrective action by centres, as it there was a range of incorrect answers presented by the cohort, with significant inaccuracies.

Question 11 (c) (i)

The majority of candidates were able to gain one mark for their named primary food from a plant source. Weak answers misread the stem of the question, and identified primary foods other than plants.

(c) Food technology involves the combining or processing of raw materials into edible food products.

(i) Name **one** primary food from a plant source.

(1)

wheat



ResultsPlus
Examiner Comments

The correctly named primary plant food secures the candidate one mark.

(c) Food technology involves the combining or processing of raw materials into edible food products.

(i) Name **one** primary food from a plant source.

(1)

~~Wheat~~ Soya bean



ResultsPlus
Examiner Comments

1 mark awarded for accurate response.

Question 11 (c) (ii)

There were many varied answers to this question but it showed that candidates had little understanding of the butchery process and the most common answers were about mincing or cooking the meat and making it into a burger or sausage. The terminology 'secondary food processes' was not understood by many. Most candidates were able to gain at least 1 mark here. Either for naming a process "chopped," "cooked" and "minced" had a high response or for naming a food product: "burgers", "sausages" and "ready meals" were seen the most. Incorrect responses seemed to repeat the question.

(ii) Describe how meat may be processed into a secondary food product.

(2)

meat can be minced or made into things such as burgers and sausages, which are secondary as they have been changed



ResultsPlus

Examiner Comments

Those candidates gaining 2 marks seemed to combine "minced" with "burgers" as the most popular response.

(ii) Describe how meat may be processed into a secondary food product.

(2)

beef, which is a primary food, can be ~~made~~ processed into mincemeat which can be used ^{for} ~~is~~ burger, a secondary food (when combined ~~is~~ with onions)



ResultsPlus

Examiner Comments

Nice answer with process (mince) developed into a named secondary food product (burger). Two marks awarded for accuracy.

Question 11 (c) (iii)

Many candidates showed their knowledge of technical words by offering "batch" or "mass" production in their answers. Better candidates, gaining 3 – 4 marks connected points to give an explanation to their answer such as "automated" or "controlled by computers" which made them "more accurate" or "less errors than humans". Few candidates mentioned the "costs involved in production" or that it was made from "stainless steel". Incorrect responses here also misread the question and named industrial equipment and then often followed this up with their function rather than their characteristics.

(iii) Describe **two** characteristics of industrial machinery used in the food industry.

(4)

1. The conveyor belt is used to transport ingredients or the product during the production process ~~which~~^{which} fast and saves labour costs too. It is part of continuous flow production.
2. A depositor is used to accurately deposit a certain amount of ingredient / component to ensure consistency and also makes it easier.



ResultsPlus

Examiner Comments

Most candidates were able to gain 1 – 2 marks and it was clear that they understood that industrial machinery was much "larger," "quicker" and able to produce "large quantities". This answer secured three marks, as the final sentence about the depositor required a description linked to the accuracy/ consistency of the industrial machinery.

(iii) Describe **two** characteristics of industrial machinery used in the food industry.

(4)

1 machines can process the food quickly than a human.

2 ~~to~~ can do large quantities quicker than a human doing it.



ResultsPlus

Examiner Comments

This answer secured two marks for quick and large quantities, but as there was no linked description the candidate was unable to secure any higher marks.

Question 11 (d)

Generally a highly accessible question for candidates of all abilities. Most candidates were able to gain at least 1 mark by identifying unique quality but many responses included discussion of profit: selling one off production at a higher price.

(d) Celebration cakes are often made using one-off production.

State **two** advantages of one-off production when making celebration cakes.

(2)

- 1 The cakes can be personalised by the customer to make them more special.
- 2 The cakes can be made for a specific date like a party.



ResultsPlus
Examiner Comments

Good understanding demonstrated by the candidate with two accurate statements linked to the advantages of one-off production.

2 marks

(d) Celebration cakes are often made using one-off production.

State **two** advantages of one-off production when making celebration cakes.

(2)

- 1 It is high quality and unique, normally one of a kind, meaning a manufacturer will get more money ^{for} ~~part~~ the producer.
- 2 It can be designed to meet the specific needs of an individual consumer, for example a wedding cake. Requires skilled workers, so is worth more.



ResultsPlus
Examiner Comments

Excellent answer with good detail and consideration, secures two marks.

Question 11 (e)

This question required candidates to describe two modifications to the sponge cake product that would make it suitable for a consumer following a diabetic diet, using candidate's product analysis and evaluation skills. Many candidates offered sound modifications to the food product, focussing on reducing the sugar or increasing the fibre content of the product. There were many imaginative variations to the recipe presented by candidates, but candidates often struggled to describe how these modifications were making it suitable for the special dietary need. Vague statements about changing the sugar content were not worthy of any marks. This question offered stretch and challenge opportunities, and in the main this was a successful outcome to those students.

(e) The following recipe was used to produce a prototype sponge cake:

Sponge:

200 g butter

200 g caster sugar

200 g self raising flour

4 eggs

Fillings:

2 tbsp strawberry jam

50 g butter

100 g icing sugar

Describe **two** modifications that would make the sponge cake suitable for someone following a diabetic diet.

(4)

1. remove the strawberry jam and replace with sliced fresh strawberries to reduce the sugar content and so doesn't ~~raise~~ ^{raise} blood sugar ~~levels~~ levels as much. ~~butter~~ cream icing
2. swap the butter and sugar in the filling for ^{150g} whipped cream to reduce the sugar content and so doesn't raise blood sugar levels as much.

(Total for Question 11 = 22 marks)



ResultsPlus

Examiner Comments

Many explanations offered changing the ingredients to some which were very high in saturated fat such as whipped cream, with no meaningful solution to the question. However the answer we see here, secured four marks as the recipe modifications are suitable with good reasoning.

(e) The following recipe was used to produce a prototype sponge cake:

Sponge:

200 g butter

200 g caster sugar

200 g self raising flour

4 eggs

Fillings:

2 tbsp strawberry jam

50 g butter

100 g icing sugar

Describe **two** modifications that would make the sponge cake suitable for someone following a diabetic diet.

1 The ^{caster} sugar could be substituted for a sweetener as it won't raise their blood sugar levels as high (the diabetic's) (4)

2 Also the strawberry jam (high content sugar) could be changed to a real strawberry as the filling as it is healthier and only contains the natural sugar of the strawberries

(Total for Question 11 = 22 marks)



ResultsPlus

Examiner Comments

Knowledge by candidates about the requirements of a diabetic diet was strong. Incorrect answers (gaining 0 marks) in about only 5% of responses thought that "increased sugar" was needed by diabetics. The most popular correct responses were linked to "reducing or removing the sugar", "changing the jam". The alternatives offered for these changes seemed to focus on "replacing with sweeteners" or "changing to a diabetic/ low sugar jam or to fresh fruit". This candidates' answer secured full marks for the accurate description linked to recipe development.

Question 12

The design question produced some excellent responses from candidates with excellent sketching and annotation from candidates across the ability range. The link between coursework activities in the design task was most apparent, with some innovative food product design work. A wide range of vegetarian main meals were presented with most candidates managing to illustrate and label two different ideas. Centres continue to work hard to raise achievement in this section of the question paper. All examiners noted the continued improvement in communication techniques and the ability of the candidates to be creative, imaginative and at times quite inventive with their recipes.

Where candidates had read the question carefully and planned their answer methodically; sketches and annotation succeeded in showing how the design had met the specification points, they were rewarded with some high marks. It is not acceptable to just label the specification points; they must be annotated indicating how the design has met each point. The point that caused greatest difficulty was the suitable to be reheated. Responses needed to focus on ways this can be achieved. Therefore correct answers could have referenced that the food product may be reheated in a microwave or on the hob, heating instructions in packaging container, reheated in saucepan, previously cooked, size of vegetables reduce cooking time, or a mention about transference of heat (conduction or convection).

Candidates who planned their answers carefully were rewarded with high marks because they used the specification as a checklist, to ensure they covered all the points.

Candidates should use the specification as a checklist to ensure that each design is annotated differently, and that each point is met for the design brief.

This was a popular question and the majority of candidates responded fully. Some of the designs were very good, being fully annotated and sketched well. There seemed to be a logical process in answering where the candidate had worked through the specification points one by one.

The amount of annotation on sketches still varies from one extreme to another but there are fewer candidates providing just sketches for their answers. Popular designs were pasta dishes (spaghetti bolognese, lasagne), pizza, chilli & rice, curry & rice, noodle dishes, potato topped pies. Incorrect choices of design were very few and included dishes such as fruit pies. Weaker candidates seemed to gain 4 – 8 marks and stronger candidates gained 12- 16 marks.

Design idea 1

Quorn cottage pie

(8)

presented in an organised and visually superb way to increase it's overall appearance with distinct layers

all products in this dish can be reheated easily in a microwave oven

potatoes are a starchy carbohydrate and so are a filling food

mash made with local potatoes to increase the sustainability

Quorn is an Iron Supplement

Soya milk used in the mash instead of normal milk as consumer is lacto vegetarian

Quorn used as the consumer is lacto vegetarian meaning he doesn't eat meat

Carrots used to add flavour

Flavoured with ^{garlic} pepper to enhance the flavour of the product

texture is smooth due to the mash and then chunky due to the carrots

Design idea 2

Egg and cheese toastie

(8)

uses egg to provide for a lacto ovo vegetarian eating this product

carbohydrates in bread are starchy to help the consumer feel full

overall taste will be linked to texture as the bread is tough and will give a filling and starchy taste whereas the filling being a smooth and pasty texture will be a rich taste



cheese is a soya cheese meaning it can be eaten by a lacto ovo vegetarian

walnuts added to the top to increase the iron content of the product

eggs used will be from a local farm to increase the sustainability

enriched by basil being added to the product.

all products will be able to be reheated to allow for additional consumption

(Total for Question 12 = 16 marks)



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Examiner Comments

Two different named vegetarians with appropriate choice of food products for each, although an ovo lacto vegetarian will not eat Quorn due to the egg albumin binding the product together. In the second design, the reheating instructions are vague. This answer secured 14 marks.

Many answers repeated the specification point of 'able to be reheated easily'.

The second design was often not as detailed as the first, maybe due to time constraints and exam pressure.

Also, it was sometimes a duplicate of the first with few different points shown.

Repeating of an answer for the specification from design 1 to design 2 was still common but less so than previous years.

Named group of vegetarians

– this was one of the weakest areas of the specification. Around 60% of candidates knew the types of vegetarian but too many were incorrect about vegetarians' dietary needs and therefore unable to gain the mark e.g. saying vegans or lacto vegetarians could eat quorn. Few candidates gained marks here.

Filling

– Well answered with many correct responses – potato, lasagne, other types of pasta, rice, pizza base and bread were listed. Most candidates gained these marks. Only a few relied on the portion size for this mark.

Good source of protein

– Quorn was probably the most popular response here with eggs in second place. Other correct responses were for fish and cheese with only a few naming soya or tofu. Those that failed to gain marks here were for repetition of Quorn. Most candidates gained at least 1 of the 2 marks here.

Good source of iron

– Those that gained the marks here responded with green leafy vegetables (spinach was the most popular with rocket/watercress /cabbage as second place) or egg yolk, broccoli or bread. Many incorrectly thought that Quorn was a good source of iron. A reasonably well answered question showing good knowledge.

Fresh seasoning

– Varieties of fresh herbs were the most popular (coriander, thyme, parsley were cited the most) to gain at least 1 mark here. Many candidates forgot to annotate this point or repeated the herb named in the first design. Most of the incorrect responses were for giving spices (paprika, black pepper) or salt as an answer.

Sensory quality linked to texture

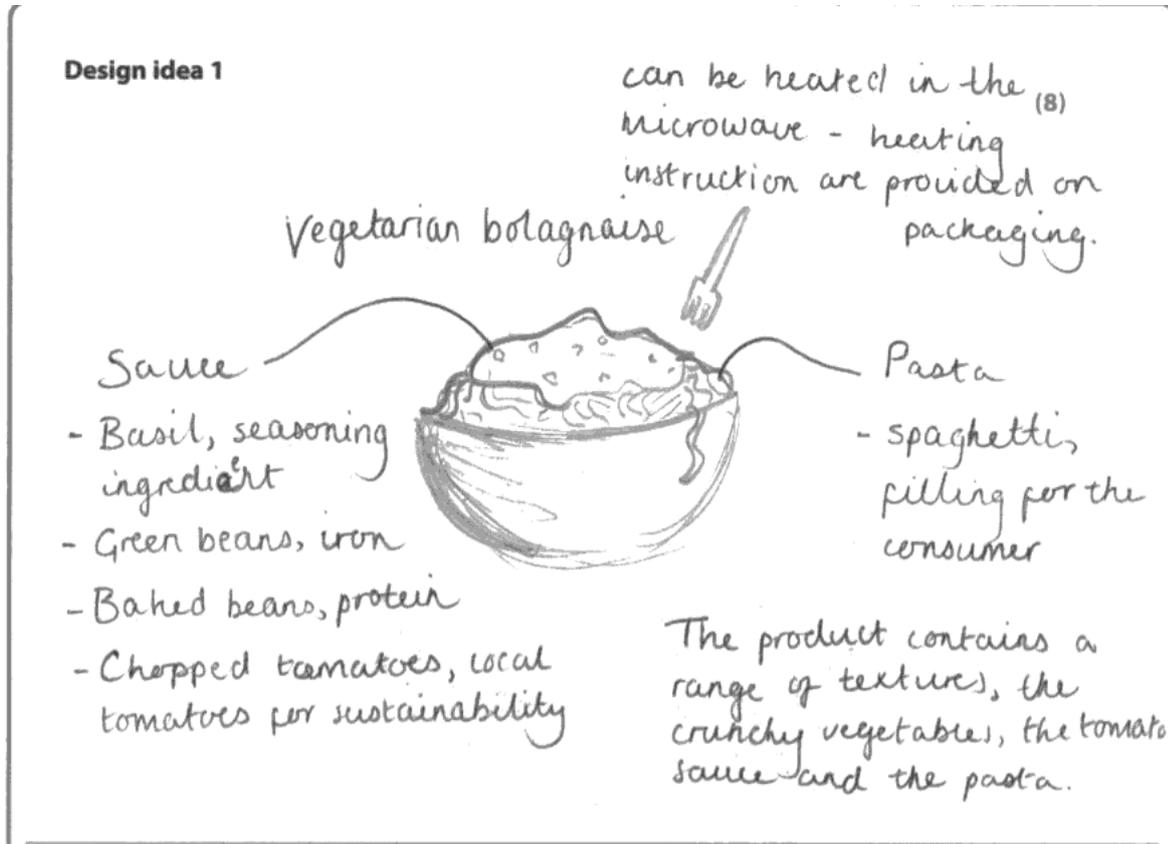
– It was interesting to note the lack of candidate's vocabulary for this question. A limited range of adjectives linked to texture were seen. Many candidates failed to gain the mark in the second design for repetition or many just said that an ingredient had a good texture without actually describing it and failed to gain any marks. Common correct responses were soft, chunky, crispy, smooth. Centres should focus on creating sensory attribute word banks with candidates to improve their literacy skills.

Able to be reheated easily

– Better application of knowledge here than in previous years but this was still mostly overlooked by candidates. Those gaining marks did so by giving different methods of reheating the dish such as oven or microwave. There were several repeats from design 1 to design 2 meaning many candidates only gained 1 mark.

Be sustainable

- This specification was very well answered. Candidates showed subject knowledge of recyclable packaging; seasonal foods; minimising food miles; use of organic, free range or Fairtrade ingredients. Some candidates failed to annotate for this point gaining zero marks but the majority were able to gain 2.



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This was a classic response seen by examiners. Good logical design and neat annotation with generally good labelling of how the product meets the specification. However, a number of repeat answers secures the candidate 11 marks.

Question 13 (a)

This question requires candidates to demonstrate their knowledge of the working characteristics of ingredients within product analysis.

(a) The fruit trifle contains different component layers.

Give **one** property of the chocolate custard layer that makes it suitable for the trifle. Justify your answer.

(2)

Property

It holds the trifle in place. It also acts like a separator.

Justification

The chocolate custard gives the trifle a solid structure. Also the cream can be piped on easily as it will not mix in with the sponge finger layer or the orange jelly.



ResultsPlus

Examiner Comments

This was well answered but the most common answer for the property was that it was thick/set/solid or colour/texture and most candidates included a good justification to obtain the second mark. 2 marks

Property

It gives a range of textures and tastes.

Justification

As chocolate and orange go together, the smooth texture will go well with the wobbly orange jelly. Making it suitable for the trifle.



ResultsPlus

Examiner Comments

An interesting description in the second part of the answer with the justification linked to the sensory properties of ingredients. 2 marks

Question 13 (b)

Candidates were expected to identify two industrial food preparation techniques, and their answer could have focussed on separation processes such as cleaning, drying, peeling, grading or size reduction, mixing and combining, blanching or weighing and measuring activities.

(b) The fruit layer has been prepared for processing.

List **two industrial** food preparation or processing techniques used to make the fruit layer in the trifle product.

(2)

1 washing - to ensure the food is clean.

2 Slicing - the fruit into small pieces to make the dish more fruity.



ResultsPlus

Examiner Comments

The most popular answers were washing, chopping and slicing for the fruit layer. Frequently candidates also mentioned whisking or piping cream, and had clearly misread the question. Candidates either knew all 3 responses or listed a random selection of vague, incorrect answers, with no relevance to the question.

2 marks

Question 13 (c)

Candidates demonstrated a good understanding of the benefits of batch production process, some responses wasted answer space by drawing comparisons to mass production. Candidates were awarded high marks when they could correctly identify the high risk nature of the ingredients and the need for stock rotation, or popularity of the product, or reference the changes to the layers, ease of production and automated production line to create volume and speed of service.

(c) The fruit trifle has been produced using batch production.

Explain why the fruit trifle is made using batch production.

(2)

Using batch production means a number of the trifles can be made but on a new batch some qualities (like the jelly flavour) can be changed slightly.



ResultsPlus
Examiner Comments

The answer references volume and ease of recipe development with flavour change, so this answer secures two marks.

(c) The fruit trifle has been produced using batch production.

Explain why the fruit trifle is made using batch production.

(2)

Batch production is best because trifle is mainly eaten in the summer. Continuous would just create excess amounts of it, because it is not in high demand. Batch you can control quantities produced, and change and create different types.



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Examiner Comments

This answer shows good cognitive explanation with references to seasonal demand and recipe variation.
2 marks

Question 13 (d) (i)

Candidates answered this question with varying degrees of success, depending on their interpretation of the command word 'explain'. Where candidates provided a linked explanation to their initial statement, they were rewarded with the full two marks.

All candidates attempted the question with majority gaining at least one mark.

(d) Explain how the fruit trifle could be successful at meeting the following specification points:

(i) environmentally friendly

(2)

The plastic container is likely to be recyclable which reduces waste. The sponge fingers, chocolate custard and cream are likely to have been produced in England which reduces food miles.



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Examiner Comments

Responses were knowledgeable showing understanding of environmental design and manufacture of the product.

2 marks

(d) Explain how the fruit trifle could be successful at meeting the following specification points:

(i) environmentally friendly

(2)

Because the ingredients used in the trifle wouldn't or had to be made in another country so there are not many food miles involved and so less CO₂ is going into the atmosphere from food transportation.



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Examiner Comments

A good answer with a linked response from the initial statement with the explanation to secure two marks.

Question 13 (d) (ii)

Candidate answered this question with varying degrees of success, depending on their interpretation of the command word 'explain'. Where candidates provided a linked explanation to their initial statement, they were rewarded with the full two marks.

All candidates attempted the question with majority gaining at least one mark.

Candidates able to identify a range of key points to gain one mark but many lacked a clear justification. Candidates do not provide good linking words in their sentence structure causing the examiner to search answers to find candidates meaning. Generally candidates tended to focus their answers on the clear packaging and layers in the dessert.

(ii) eye-catching to attract consumers.

(2)
The packaging can be colourful with a big bold, bright title or it can be transparent so that you can see the bright layers of the trifle such as orange, brown and white.



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Examiner Comments

The candidate has clearly explained the link between the transparent packaging and the visual layers, to ensure the packaging is eye catching to consumers.

2 marks

(ii) eye-catching to attract consumers.

(2)
This is a colourful product that makes it stand out and appealing to eat with the variety of colours within the product. And also the cream the way that it has been piped on with the decoration makes it more appealing.



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Examiner Comments

The piped cream layer explanation is used to good effect in this answer.

2 marks

Question 13 (e)

As an extended writing exercise linked to Quality of Written Communication, this question proved to be challenging for many candidates. This question is marked using the level descriptors outlined in previous sample assessment materials in the teacher guidance that accompanies the specification materials. Candidates must demonstrate accurate technical vocabulary linked to food technology and a good understanding of the evaluation process. Where writing communicated answers effectively, with clarity and organisation, candidates were rewarded with high marks. It is possible to provide 3-4 well explained evaluated points to achieve the high marks. Candidates could answer this question in either a bullet pointed list or paragraph format focussing on the main comparisons and similarities between the two recipes. To move the response from a weak/average answer to one that is worthy of full marks, requires explanation of each comparison together with clear, effective communication throughout the response.

Evaluation and comparison in this answer is worthy of a high level response in the level descriptors.

Overall this question was not very well answered and candidates were confused about the different recipes. Many thought that A was the best – mainly as it had less ingredients and from this they thought it used more standard food components. The candidates didn't refer to the manufacturing process as part of their discussion and just compared ingredients based on if they were cheaper or healthier. They found it difficult to compare them because of this.

Evaluate recipe A compared to recipe B for use by a food manufacturer.

(6)

The main difference between Recipe A and Recipe B is that recipe A is more of a domestic recipe, whereas, Recipe B is more of a commercial recipe. We know this because Recipe A uses fresh, low fat and natural preservatives (i.e. sugar) to ~~help~~^{prolong} the shelf life. Whereas, Recipe B uses modified starch, pasteurised egg, colour, flavourings and stabilisers etc. to help preserve to produce and to ~~also~~^{also} make up for flavours and colours that would of been lost in the early stages of processing. Recipe B also uses less whipping cream than Recipe A. This would make the cost per unit ^{decrease and make the} product cheaper to make and buy as they're using less ingredients.

(Total for Question 13 = 16 marks)



ResultsPlus

Examiner Comments

Higher marks were given for responses that referred to the use of standard components in recipe B; that recipe A was homemade and B made in a factory. Many cited that the fresh ingredients of recipe A had a much shorter shelf life. The cost of using fresh ingredients was also raised many times. Using preservatives such as salt in B to extend the shelf life or colours to restore those lost in manufacturing were seen often. Weaker candidates just made correct statements without explanations gaining 3-4 marks. Full marks were given to many very strong candidates. Candidates should be reminded that it is possible to gain the full 6 marks without writing as much as many did.

It was often a case of the two recipes being repeated with no explanation given or observations made.

However, those that did answer correctly often understood very well and made relevant points related to a comparison of the recipes.

Many identified A as being one off and B as manufactured in large quantities.

6 marks

Evaluate recipe A compared to recipe B for use by a food manufacturer.

(6)

- Recipe A includes ~~fresh~~ ingredients such as fresh fruit whereas Recipe B has fruit concentrate showing Recipe A is a homemade small volume recipe and Recipe B is a large volume industrial recipe.
- Recipe A is sustainable as the fresh fruit could be local in the summer.
 - Recipe B is cheap as it uses less fruit and more bulk ingredients and enhancers
 - Recipe B ~~to~~ ^{uses} ~~an~~ artificial ~~flavour~~ tastes and methods to achieve its product
 - Recipe B is likely to be more unhealthy as it contains ~~salt~~ salt and colours in it.

(Total for Question 13 = 16 marks)



ResultsPlus Examiner Comments

This question posed difficulties for candidates as many did not appear to understand what was required of them. Those candidates gaining 0 marks tended to mix up the recipes and incorrectly give the wrong information for each. Many candidates also just seemed to re-write the list of ingredients as a comparison without giving explanations for the difference. Some candidates divided their answer sheet to make comments about each recipe and used bullet points which successfully gained them around 4 marks or so.

This answer is well ordered, with some simple observational statements and evaluation to warrant 5 marks.

Question 14 (a)

A named unit of measurement for food energy was the only acceptable answer for this question, with varying degrees of success for candidates across the ability range.

14 Energy is needed in the body for many reasons.

(a) Name a unit of measurement for energy.

(1)

Joules.



ResultsPlus
Examiner Comments

Correct answer, awarded one mark.

14 Energy is needed in the body for many reasons.

(a) Name a unit of measurement for energy.

(1)

Calories.



ResultsPlus
Examiner Comments

Correct answer awarded one mark. It was surprising how many candidates mentioned watts and electricity.

Question 14 (b)

This was quite well answered with most candidates achieving 1 or 2 marks with electrical impulses being the most common answer. With regards to the mechanical element, most candidates mentioned movement but didn't explain what the actual movement was.

(b) Give **one** example for **each** of the different types of energy used in the body.

(3)

Mechanical

movement of joints

Chemical

break down of ^{protn} protein in body

Electrical

impulse sent from brain



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3 marks

(b) Give **one** example for **each** of the different types of energy used in the body.

(3)

Mechanical

used for movement by muscles.

Chemical

Enzymes used for energy ~~in~~ digestion.

Electrical



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Examiner Comments

This is representative of an answer with some good understanding and knowledge recall. 3 marks

Question 14 (c)

Generally the answers for this question were disappointing.

The relationship between food and drink intake and physical activity is called energy balance.

1g Protein	4kcal
1g Carbohydrate	3.75kcal
1g Fat	9kcal
1g Alcohol	7kcal

If your energy intake from food and drink is greater than your energy expenditure, you will gain weight.

If your energy intake from food and drink is less than your energy expenditure, you will lose weight.

If your energy intake from food and drink equals the energy used, your weight will stay the same.

People who are overweight need more energy for BMR. Athletes in endurance events and hard training need more energy for PAL.

(c) Explain the term 'energy balance'.

(2)

So the amount of energy consumed is the same being released, this is energy balance so spare energy won't be stored as fat so you put on weight and you won't lose weight from using the saved 'energy'!



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Examiner Comments

The energy the body takes from food and drink is measured in kilojoules or kilocalories. You need enough energy to meet the demands of your BMR and PAL.

Candidates tended to focus on balancing food intake linked to healthy eating or recipe development. Answers that fared better were those that focussed on the command word and explained the concept.

2 marks

(c) Explain the term 'energy balance'.

(2)

is the amount of calories you need in proportion to the energy you burn off when doing exercise. The balance between how much you eat and how much you use.



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Examiner Comments

Good answer. Written with understanding and terminology (proportion, exercise, calories, balance).

Question 14 (d)

A well answered question with the majority of candidates achieving 2 marks.

(d) Food is an essential part of our lives. Everyone has different needs and requirements for food.

List **two** factors that affect our needs and requirements for food.

(2)

- 1 obesity - will need more healthier food to lower the risk of a heart attack.
- 2 Vegetarian - which means when cooking a meal you will have to find a substitute to meat for example Quorn.



ResultsPlus
Examiner Comments

High correct response rate from candidates. Sound subject knowledge on this topic. This is an example of a response that was awarded 2 marks.

(d) Food is an essential part of our lives. Everyone has different needs and requirements for food.

List **two** factors that affect our needs and requirements for food.

(2)

- 1 Different dietary requirements, such as a: vegan, vegetarian, lacto-ovo, ovo, lacto, coeliac and diabetic diets.
- 2 factors that affect our food requirements are the temperature as we have to need to eat cooler foods and our preferences.



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Examiner Comments

This is another example of a response that was awarded 2 marks.

Question 14 (e)

The majority of responses focused upon dietary links to growth and the requirement of food being interesting to the child. Candidates demonstrated good knowledge of healthy eating guidelines. Some responses were confused by the term pre-school and candidates discussed weaning guidelines.

(e) Describe **one** factor to consider when planning meals for a young pre-school child.

(2)

How much protein there is in the meal, as protein is needed for the growth and repair of body tissue, which is necessary for children.



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Examiner Comments

Linked response using protein and the functional characteristic in the diet, with reference to meal planning for young children. Full marks.

(e) Describe **one** factor to consider when planning meals for a young pre-school child.

(2)

It needs to be interesting - bright colours and a range of textures, to keep them interested and so they want to eat the food product. It also needs to be easy for them to eat (finger foods eg carrot sticks).



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Examiner Comments

Good reference to size, colour and handheld food for ease of eating, secures two marks.

Many answers were based on allergies and not giving children food which would make them hyperactive however, candidates were often unable to state the name of the ingredient or component that would have this cause or effect.

Question 14 (f)

This question was answered well and fully in most cases, showing technical understanding, good use of vocabulary and terminology linked to food technology as well as excellent application of knowledge and understanding. Candidates understood what was expected of them and many candidates gave six points or more related to food labelling.

Many gave irrelevant answers regarding preservation techniques rather than focusing on packaging. Few were aware of packaging preventing deterioration through humidity or temperature changes. All in all a well answered question for an extended answer style question and many candidates gaining 4 – 6 marks.

The most popular answers included references to the protection of the food; preventing bacteria/germs from entering; giving information to the customer and promoting by making packaging eye-catching through colours and images. Many also showed good subject knowledge about modified atmosphere packaging and vacuum packaging. Other focused on packaging materials.

This question was left blank by a few weaker candidates. Other candidates that did not gain any marks wrote out the question without making any valid points. Weaker candidates often achieved 3 marks for making different valid points with little discussion. Handwriting was again a major problem. Some centres had clearly taught this question well with many candidates giving “textbook” answers obviously learned verbatim. Many candidates only focused on labelling information in their response and it is clear that they had learnt this from last year’s paper. The strongest candidates structured their responses and had clearly made notes about the content of their answer before attempting it. This should be encouraged by centres as it usually led to the highest marks being awarded.

(f) Most food items need to be packaged.

Discuss the role of food packaging to ensure that the food remains in prime condition for the consumer.

(6)

Food packaging is used in several ways to ensure a product stays in its prime using various methods.

- The packaging should support and protect the food from harm if it is delicate like an egg.
- The packaging must keep the product fresh if it deteriorates quickly like fruit & vegetables.
- The packaging must keep the product away from cross contamination until being opened like meat's and fish.
- The packaging must hold the product without anything leaking out if it is a liquid like milk.
- The packaging should contain no oxygen in it as this makes certain products go off therefore it should contain hydrogen instead to keep the food until consumption like bread or salad.
- Therefore the packaging should protect, keep and hold the product until the consumer opens it.

(Total for Question 14 = 16 marks)

TOTAL FOR PAPER = 80 MARKS



ResultsPlus
Examiner Comments

A well structured answer that was awarded 6 marks for the linked responses referencing the role of packaging to ensure the food remains in prime condition for consumers.

(f) Most food items need to be packaged.

Discuss the role of food packaging to ensure that the food remains in prime condition for the consumer.

⑥

Food packaging helps protect the food from harmful bacteria. Packaging such as vacuum packs allows no air inside in which to contaminate the product or none will until it is in the home and opened.

Food packaging also ensures the product is easily carried as it could get crushed/damaged on journeys. So the right packaging ensures it is safe and kept in the best condition. An example of this would be handles on foods and hard containers.

Packaging also shows important information so the consumer knows how to keep it in the best condition. But also supermarkets and shops for example sell by dates allow consumers the freshest and best products as these will be before sell by so that it is in the best condition.

(Total for Question 14 = 16 marks)

TOTAL FOR PAPER = 80 MARKS



ResultsPlus
Examiner Comments

A very good correct response with logical discussion that is presented in a coherent, concise manner with good use of terminology and explanation. 6 marks.

(f) Most food items need to be packaged.

Discuss the role of food packaging to ensure that the food remains in prime condition for the consumer.

(6)

Packaging ensures that the product is in prime condition for the consumer as it prevents contamination. For example meat are packaged with plastics to make sure that they aren't contaminated by the air.

Furthermore packaging prevents the tampering of the product for example jams have a paper tag on the side of the jar to make sure that it is evident if the jam jar has been opened before the purchase.

Moreover atmosphere modified packaging done in many meat products makes sure that the meat is fresh for consumers when they cook it. For example in many meat products oxygen is removed and nitrogen is added to prevent meat from oxidising and being discoloured.

In addition the storage instructions on the packaging informs consumers on how to store the product before it is consumed. This allows the food to be at its best even after it has been purchased so consumers eat the product at ~~use~~ its best condition. The stars on frozen products *

The best before date visible on the packaging also advises consumers on when the product should be consumed to make sure that it is at its best quality when eaten by the consumer.

Products are also vacuum packed so that they stay fresh and of high quality when eaten. For example bacon is vacuum packed to prevent bacteria from growing.

(Total for Question 14 = 16 marks)

TOTAL FOR PAPER = 80 MARKS

* tells us how long it can be frozen for. one star indicates one month.



ResultsPlus
Examiner Comments

This answer shows good depth and breadth of understanding with excellent use of examples to exemplify the statements and discussion. 6 marks.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- Check the command word for each question, as this helps you identify what you need to do to answer the question.
- Read each question carefully and check the mark allocation, to ensure you can access the full range of marks.
- Give examples to support your answers, where possible.
- Short, concise answers tended to be better than lengthy responses that were too wordy or go beyond the designated answer space.
- Draft the extended writing answers carefully to ensure you present a balanced answer for discuss and evaluate questions.
- Revise thoroughly and use internet revision sites (BBC bitesize revision) or subject related textbooks to check your knowledge and understanding.
- Make sure your hand writing is legible.
- Candidates often had difficulty in achieving the full marks for questions asking for an explanation, because answers were not supported with relevant linked examples or reasoning. Simply adding a connective 'because'; 'so that'; is often the prompting that a student requires to provide a more technical or developed answer which will be linked to the initial statement.
- Candidates that had read the question carefully and planned their answer methodically; and sketches and annotation succeeded in showing how the design had met the specification points, were rewarded with some high marks. It is not acceptable to just label the specification points; they must be annotated indicating how the design has met each point. Each of the two designs must be different, in order to access the full range of marks.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

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