Examiners' Report

June 2014

GCSE Design & Technology 5FT02 01

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Introduction

The specification is in its fifth year of delivery and the pattern and format of the paper is well established to centres and candidates. Centres are continuing to make good progress with their teaching and learning activities in Food Technology. 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 of students. This paper contained a broad and varied distribution of marks across the paper, 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.

Question 11 (a) (i)

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

Tools/Equipment	Name	Use
	manual measuring $ spoons. (1)	Measuring dry/wet ingredients

Examiner Comments

Generally a well answered question - measuring spoons correct answer

Question 11 (a) (ii)

Many candidates achieved one mark for correctly identifying the correct use of a food probe in food preparation, with the most popular answers focussing on checking the internal temperature of the food product. Measuring temperature did not warrant any marks.

	Industrial/commercial food probe	Checking chicken is cooked all the way through & is at the right temperature (75°) (1)

Examiner Comments

Nice answer with named high risk food and temeprature control

Question 11 (a) (iii)

A disappointing set of answers generally, with many candidates incorrectly naming the equipment as a frying pan. The use of this piece of equipment clearly stated stir frying as the named use, so 'wok' was the only correct answer.

	Frying pan	Frying/stir frying ingredients
	(1)	

	Frying Pan/ Wok	Frying/stir frying ingredients
	(1)	
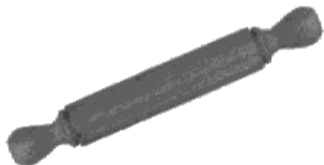
Question 11 (a) (iv)

99% of answers correctly named this piece of equipment as a rolling pin.

	rolling pin.	Flattening/rolling
		(1)

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Examiner Comments

Correct answer

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Examiner Tip

Create a picture board of commonly used equipment and tools as a useful starter/plenary for GCSE practical work!

Question 11 (b)

This question was poorly answered by many candidates. The main error occurred where the stem of the question was repeated in the answer, or vague inaccuracies about storing it on the bottom of the shelf, but with no mention where. The best answers focussed on cross contamination issues, storage temperature ranges, wrapping or covering meat and date marking.

(b) Meat is a highly perishable food product.

Give **three** rules to follow when storing fresh meat.

(3)

1. Keep cooked and uncooked seperate.
2. Keep wrapped up
3. Refrigerate or freeze until eaten

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Examiner Comments

Three correct answers focussing on the basic rules of good practice when storing meat.

Question 11 (c)

The preparation and processing techniques of ingredients are integral to food technology. Generally, this question was answered well, with references to moulding, mincing, grinding, sausage making and burger pressing.

Storing meat was well answered and the majority knew it should be stored in the fridge, covered and should be placed on the bottom shelf of the fridge to prevent drips.

(c) Processing techniques are used to create secondary food products.

Name **two** processing techniques used to shape and form meat.

(2)

Technique 1

Cutting

Technique 2

Mincing

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Examiner Comments

Techniques were well understood and correct answers plentiful.

Question 11 (d) (i)

Heat transference will be used throughout practical work and it is an opportunity to consider the different techniques and methods. In the first part of this question, few candidates could accurately name the two other methods of heat transference: conduction and convection. This area of the course requires some more focus as there was significant confusion with preservation techniques.

(d) Radiation is a method of heat transference used in cooking.

(i) Give **two** other methods of heat transference.

(2)

Method 1

convection

Method 2

conduction

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Examiner Comments

Methods of heat transfer – many candidates didn't know this question at all and put in cooking methods instead.

Question 11 (d) (ii)

The majority of candidates (78%) were able to gain one mark for their named moist method of cooking. Weak answers incorrectly added frying as a moist method of cooking, and this is clearly a significant error as the result of fried food is that it is dry and crispy. The main misconception needing addressing in centres is that the cooking medium and the outcome of the texture of the product determines whether it is a dry or moist method of cooking. Dry heat methods typically involve very high temperatures and short cooking times. Its worth noting that cooking methods involving fat, such as sauting and deep fat frying are considered dry heat methods.

(ii) Name **two** moist methods of cooking.

(2)

Method 1

poaching

Method 2

boiling

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Examiner Comments

Moist methods of cooking well answered.

(ii) Name **two** moist methods of cooking.

(2)

Method 1

boiling

Method 2

stewing

ResultsPlus
Examiner Comments

Use this as a short answer homework task to check understanding after a practical lesson - Can your students identify all the cooking methods and categorise them into moist/dry/combination?

Question 11 (d) (iii)

There were many varied answers to this question and in the main well answered. The most popular answers were generally linked to refraining from putting metal objects into the microwave oven as this poses a fire risk due to sparks, or checking the internal temperature of food to ensure there are no heat spots.

(iii) Explain **one** safety rule that must be followed when using a microwave oven.

(2)

> Never put anything metal in when microwaving as it can cause the microwave oven to explode.

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Examiner Comments

Safety rules for microwaves was good but a lot of candidates wrote not to stand too close otherwise you could get radiation.

(iii) Explain **one** safety rule that must be followed when using a microwave oven.

(2)

> An ensure that all food using a microwave oven is piping hot before eating so you know it has been cooked thouroughly and to the right temperature

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Examiner Comments

Some students were worried about radiation but it showed that candidates had little understanding of the microwave process with answers incorrectly linked to irradiation or damage

Question 11 (d) (iv)

There were many super answers to this two mark question, with the majority of candidates scoring at least one mark with a reference to colour or texture change, and then securing the second mark with the linked response that provided examples (pink/red to white/brown colour change or references to fat melting and drying out the meat). In some instances the technical knowledge was really impressive with excellent answers identifying coagulation and browning reactions caused by protein and heat.

Question 11e

This question required candidates to describe two modifications to the meat pasty product that would make it suitable for a consumer following a vegan diet, using candidate's product analysis and evaluation skills. Many candidates offered sound modifications to the food product, focussing on removing the meat content or any ingredients derived from animals. 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 protein content to quorn or mycoprotein were inaccurate as both are unsuitable for vegans due to the egg albumin used as a binding agent to create the novel protein food. Additionally both protein foods mimic the taste and texture of meat which is undesirable for vegans. This question offered stretch and challenge opportunities, and in the main this was a successful outcome to those students.

Knowledge by candidates about the requirements of a vegan diet was generally strong. Incorrect answers thought that "quorn" was a suitable substitute for meat. Candidates gained between 2 – 4 marks with many getting full marks. Most popular correct responses were about "changing the meat stock to vegetable stock", "replacing meat with tofu or vegetables", "changing the milk to a soya milk", "replacing the butter or lard". Not as many candidates knew that a plant based margarine was a correct answer and many gave incorrect terms such as soya butter as a substitute or indeed thought that butter could be eaten by vegans. Centres need to make sure Candidates are clear on terminology here.

(e) The following recipe was used to produce a prototype meat pasty:

100g plain flour
25g lard
25g butter
50g cubed steak
1 onion
100ml meat stock
1 potato
seasoning
milk or egg for sealing and glazing

Describe **two** modifications that would make the meat pasty suitable for someone following a vegan diet.

(4)

1. Vegans don't eat ~~eggs so use~~ animal products (4) so use plant based fat like margerine, instead of lard.

2. Vegans don't eat meat so replace meat stock with vegetable stock.

(e) The following recipe was used to produce a prototype meat pasty:

100g plain flour
25g lard
25g butter
50g cubed steak
1 onion
100ml meat stock
1 potato
seasoning
milk or egg for sealing and glazing

Describe **two** modifications that would make the meat pasty suitable for someone following a vegan diet.

(4)

1. Use a plant based margarine instead of butter.

2. Use a vegetable stock instead of a meat stock.

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 savoury salad products 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, and 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 suitablility for batch production. Responses needed to focus on ways this can be achieved. Therefore correct answers could have referenced that the food product maybe made as a fixed number of identical items, references to bulk buying of ingredients, short shelf life, reference to shape or processing within an automated system or a mention of changing the flavour according to seasonal demand. Once again, candidates who planned their answers carefully were rewarded with high marks because they used the specification as a checklist, to ensure they cover all the points.

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.

Many answers repeated the specification point of 'sustainable'.

The level of understanding of what was required from this question was very good, and some marks could be picked up even if the question was not fully answered.

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.

It is clear that Centres are improving the teaching of this question. Many candidates showed good subject knowledge and exam technique here. Repeating of an answer for the specification from design 1 to design 2 was still common but less so than previous years. 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, rice, cous cous, potato salads, with a range of appetising sauces. Incorrect choices of design were very few and included dishes such as fruit salads or pasta bakes. Weaker candidates seemed to gain 4 – 8 marks and stronger candidates gained 12- 16.

Named starchy carbohydrates– this was one of the strongest areas of the specification -

Pasta/cous cous/ rice/ bulgar wheat/ potato/ bread/ croutons

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 – Cheese, eggs, cream, yogurt, pulses, lentils were probably the most popular responses here with many candidates also mentioning HBV/LBV protein sources. candidates gained at least 1 of the 2 marks here.

Suitable sauce - Those that gained the marks here were for responding with mayonnaise, salad dressing, passata, pesto, sour cream and crème fraiche. A reasonably well answered question showing good knowledge. Marks gained were at least 1 here.

Five a day– A wide range of suitable answers, and 99% of candidates secured at least one mark. A few candidates forgot to annotate this point or repeated the fruit/vegetable named in the first design. Most of the incorrect responses were for giving spices (paprika, black pepper) or herbs as an answer. Many did gain the full 2 marks.
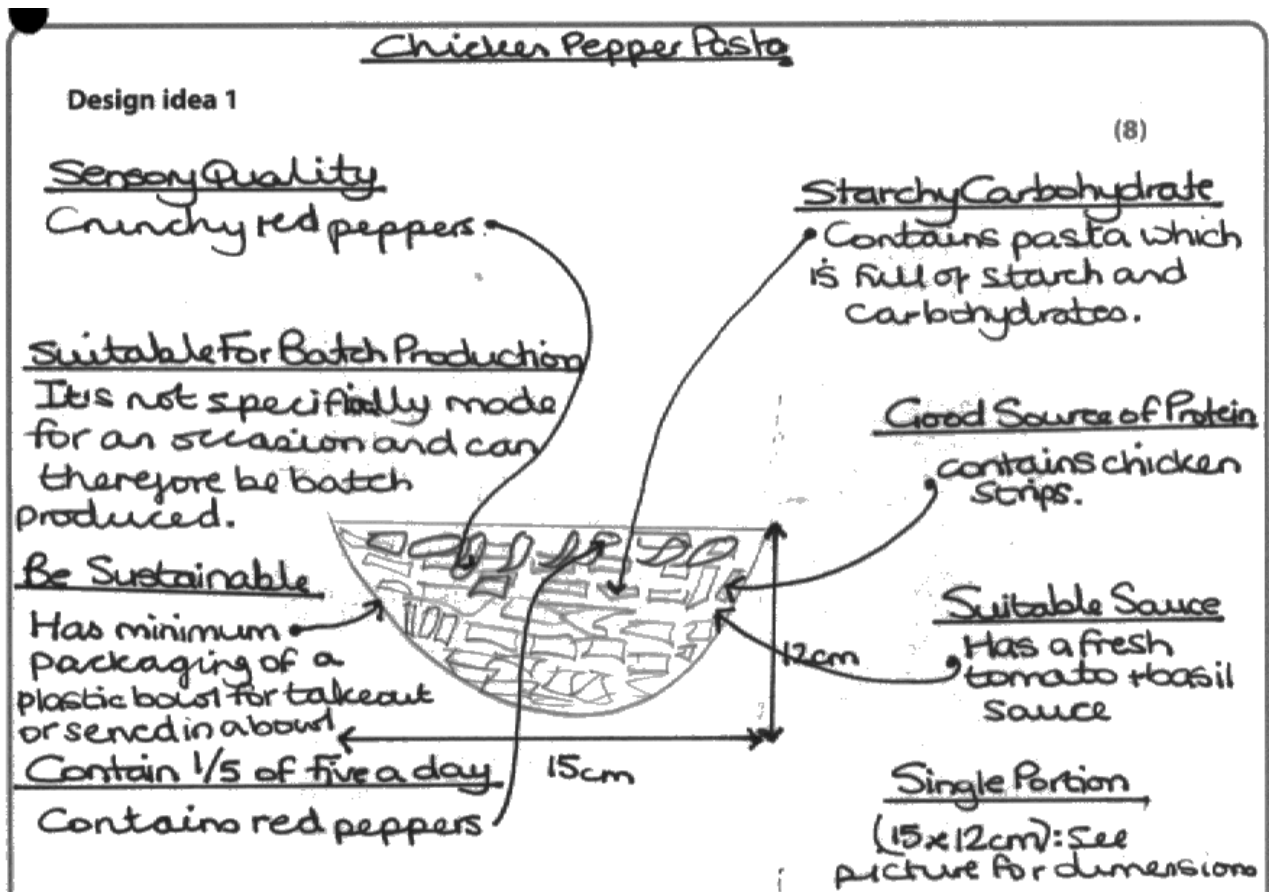
Sensory quality linked to texture – It was interesting to note the lack of candidate's vocabulary for this question. A limited range of adjectives linked to texture were seen. Many candidates failed to gain the mark in the second design for repetition or many just said that an ingredient had a good texture without actually describing it and failed to gain any marks here. Common correct responses – soft, chunky, crispy, smooth. Centres should focus on creating sensory attribute word banks with candidates to improve their literacy skills. Most gained at least 1 mark with most gaining the full 2 here.

Suitable for batch production– Better application of knowledge here than in previous years but this was still mostly overlooked by candidates. Those gaining marks did so by referencing

a fixed number of identical items, references to bulk buying of ingredients, short shelf life, reference to shape or processing within an automated system or a mention of changing the flavour according to seasonal demand.

There were several repeats from design 1 to design2 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. Those with 1 mark were mostly due to repetition.

Chicken Pepper Pasta

Design idea 1

(8)

Sensory Quality
Crunchy red peppers.

Suitable For Batch Production
It's not specifically made for an occasion and can therefore be batch produced.

Be Sustainable
Has minimum packaging of a plastic bowl for takeout or served in a bowl

Contain 1/5 of five a day
Contains red peppers

Starchy Carbohydrate
Contains pasta which is full of starch and carbohydrates.

Good Source of Protein
contains chicken strips.

Suitable Sauce
Has a fresh tomato + basil sauce

Single Portion
(15x12cm): See picture for dimensions

12cm

15cm

Design idea 2   Rice Salad w/ Cashews + Carrots

(8)

Sensory Quality.
Soft rice

Starchy Carbohydrate
• contains rice
which is starchy.

Suitable for
Batch Production
It's not expensive
and can therefore
be batch
produced.

Good Source of Protein
contains cashew nuts

Be sustainable
Contains locally
Sourced carrots.

Suitable Sauce
• Lemon and mint
sauce

Contain 1/5 of Five a day.
Contains carrots

Single Portion
150g
(Total for Question 12 = 16 marks)

Design idea 1 Kale salad with cous cous, chick peas and chilli sauce. (8)

Suitable Sauce
• Chilli sauce

good source of protein chick peas

starchy carbohydrate
• contains cous cous.

1 portion of '5 a day'
• 80 grams of Kale.

texture
• crunchy cous cous
• smooth sauce.

7cm

Single portion
• Small size
• 10cm x 7cm

10cm

• not many processes involved.

batch production
It can be bought in bulk and stored.

Sustainable
• organic Kale.
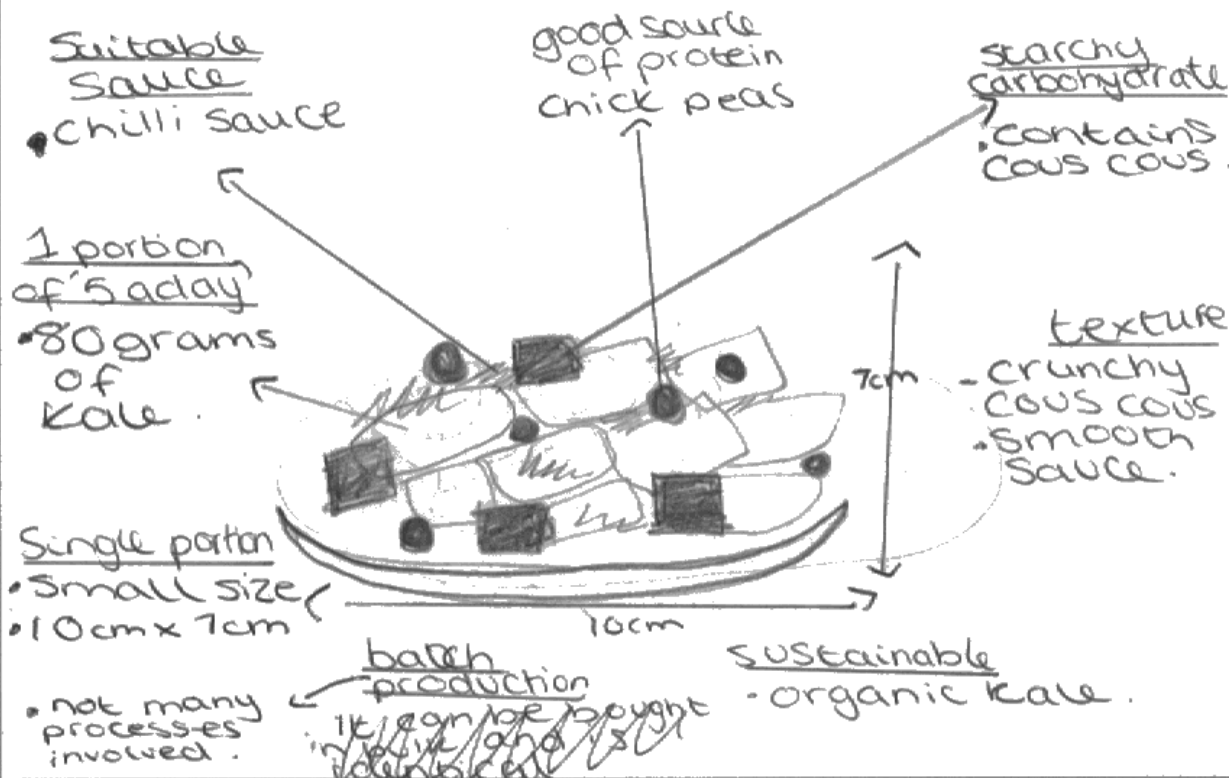
Design idea 2 mini toastie with cabbage, cucumber, chicken and mayonaise. (8)
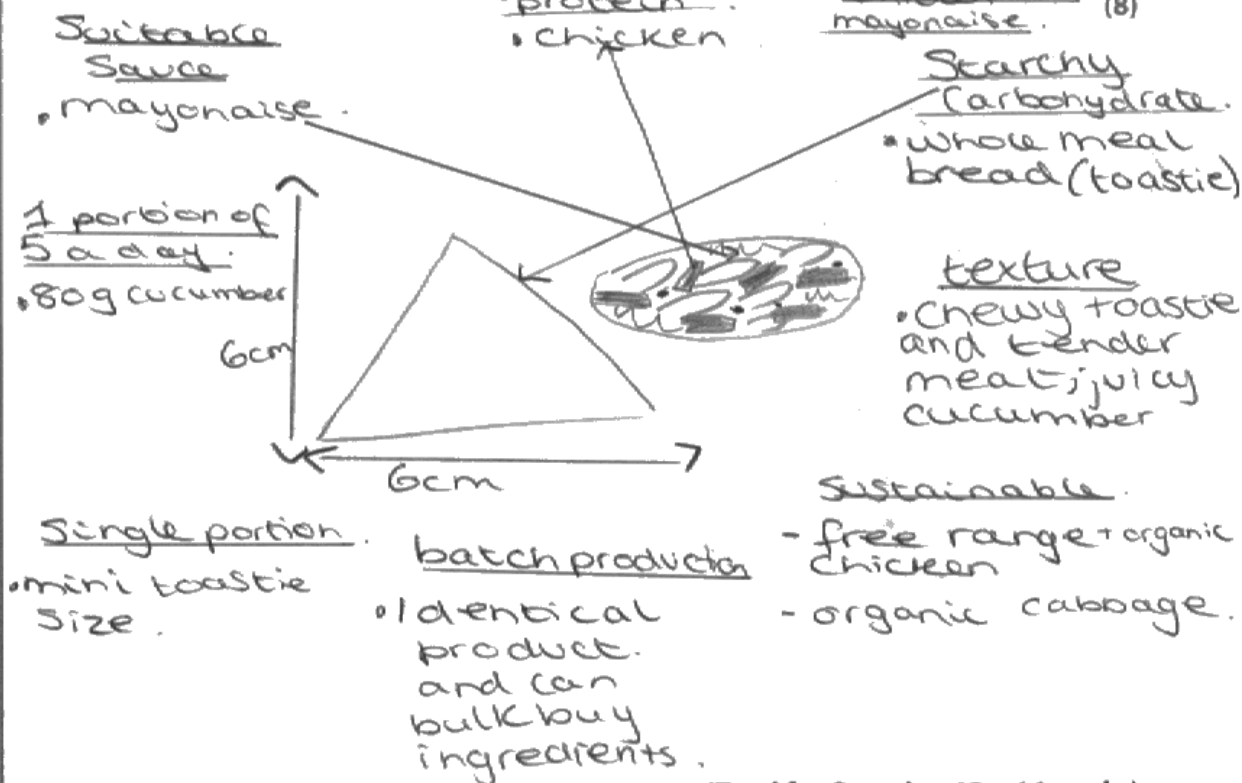
good source of protein.
• Chicken

Suitable Sauce
• mayonaise.

Starchy Carbohydrate.
• whole meal bread (toastie)

1 portion of 5 a day.
• 80g cucumber

6cm

texture
• Chewy toastie and tender meat; juicy cucumber

6cm

Single portion.
• mini toastie size.

batch production
• Identical product. and can bulk buy ingredients.

Sustainable.
- free range + organic chicken
- organic cabbage.

(Total for Question 12 = 16 marks)

Design idea 1

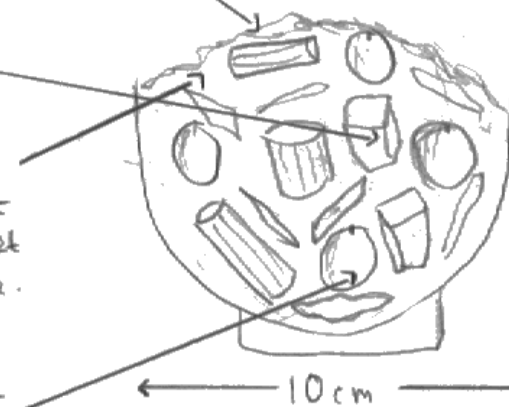### Sweet chilli and Chicken and Tomato Salad.

(8)

Carbohydrate:
This product contains pasta.

Protein:
This product contains chicken.

Sauce:
This product has a sweet chilli sauce.

1/5 a day:
This product contains Tomatoes

Pasta

10cm

←——— 10cm ———→

Single portion:
This product will weigh 300g.

Sensory quality:
Succulent chicken with crunchy lettuce and tomato.

Batch:
This product will be made in a factory on a conveyer belt.

Sustainable:
Locally grown vegetables.

Design idea 2

Baron and Tomato Cous Cous Salad box

(8)

Carbohydrate:
This product contains cous cous.

Protein:
This product contains bacon.

Sauce:
This product contains a tomato sauce.

1/5 a day:
This product contains onion.

8cm

←——— 15cm ———→

Single portion:
The salad box has dimensions of 15 X 8cm which is suitable for 1.

Sensory quality:
Crunchy lettuce with crispy bacon in a smooth sauce.

Batch:
This product is not homemade and will all be the same.

Sustainable:
Recyclable cardboard box.

(Total for Question 12 = 16 marks)

Question 13 (a)

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

This was well answered but the most common answer for the property was that it held the fish component together, added moisture or added colour to the fish pie.

(a) The fish pie contains different component layers to add a range of flavours to the product.

Give **one** other property of the cheddar cheese sauce layer that makes it suitable for the fish pie.

(1)

The sauce holds the pieces of fish so that it doesn't fall.

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Examiner Comments

The most common property was that it would hold/combine all the ingredients together and keep it together. Well answered by most candidates although quite a few candidates omitted to provide an answer.

(a) The fish pie contains different component layers to add a range of flavours to the product.

Give **one** other property of the cheddar cheese sauce layer that makes it suitable for the fish pie.

(1)

Holds the pieces of fish in place.

ResultsPlus
Examiner Comments

Read the question carefully! Many students rewrote the question stem as their answer. However, this response was correct.

Question 13 (b)

Candidates were expected to explain one reason for sampling during the manufacture of the fish pie. Most candidates focussed on health and safety aspects linked to high risk foods (temperature control), source/origin of fish (traceability) or removal of bones (choking hazard).

Most candidates gained 1 mark here. Either for stating "test flavour," "see if cooked properly" and "check if safe". Several candidates left this question blank. Those that did not get full marks gave 2 points rather than point and explain showing poor exam technique. Not many candidates gained 2 marks but those that did generally linked "cooking properly/ bones" to the "safety of the customer." Many incorrectly thought that sampling was done by the customer in the supermarket to encourage them to buy the product.

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(b) Explain **one** reason for sampling during the manufacture of the fish pie.

(2)

To check whether the flavour combonation goes well as if it doesn't then nobody will buy it. If they make sure it tastes good, then it will be fine.

ResultsPlus
Examiner Comments

There were mixed responses to this question with the majority of candidates only achieving 1 mark. The most common response was for taste rather than anything to do with safety e.g. bones.

Question 13 (c)

Candidates answered this question with success and the most popular answers tended to focus on the presentation of the fish pie, with specific links to quality – decorative finish, luxury, aiding portion control or making it more attractive to consumers.

(c) Give **one** reason why piping is used as a finishing technique for the fish pie.

(1)

Because piping is neat and it looks good.

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Examiner Comments

Finishing techniques – very well answered by candidates as they knew it was presentation and decoration.

Question 13 (d)

Candidates had 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. Responses were knowledgeable showing understanding of the nutritional contribution of fish to the diet. Protein, fat or a specific mention of a named vitamin were the most popular answers.

(d) Explain **one** nutritional benefit of eating more fish.

(2)

It gives you the vitamins and omega that is need in the body which is good for the brain and makes you healthier.

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Examiner Comments

There were 2 common answers here – the most popular being protein for growth and repair (2) and Omega 3 fats for brain development. Still a lot of candidates didn't quantify their answers and therefore only gained 1 mark.

(d) Explain **one** nutritional benefit of eating more fish.

finish.

(2)

Eating more fish ensures that healthy oils such as Omega 3 and 6 are consumed. It It contains vitamin A and D and also is a so good source of protein used for growth by the body and repair.

Question 13 (e)

Q13ei - Candidates demonstrated a good understanding of the benefits of the batch production process, some responses wasted answer space by drawing comparisons to mass production. Where candidates 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, candidates were rewarded with high marks.

Q13eii - The answers for this question tended to lack specific mention of a named group of people, or loose comments linked to being ' liked by everyone' provided a repeat of the actual question. Successful candidates identified a named group of people and linked the answer well to the nutritional content of the fish pie or performance characteristics (mild flavour, traditional meal, complete meal, soft texture).

Question 13 (f)

As an extended writing exercise linked to QWC, 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.

This was not very well answered and candidates got very confused about the different sensory tests. Many candidates repeated the information on the sensory tests without drawing any evaluation about the use or benefits of the tests to the manufacturer.

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 tests and incorrectly give the wrong information for each. Many also just seemed to re-write the list of results as a comparison without giving explanations for the difference. Some candidates divided their answer sheet to make comments about each test and uses bullet point which successfully gained them around 4 marks or so.

Higher marks were given for responses such as the use of standard testing procedures, use of a five point scale for testing, recording against descriptors (test B), coding samples, predetermined attribute criteria set by the product development team to aid testing, preference and difference testing. Many cited that test A was 'easier' and test B was used in school! The application of sensory testing by manufacturers for new product development requires attention by centres in the delivery of the specification. 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.
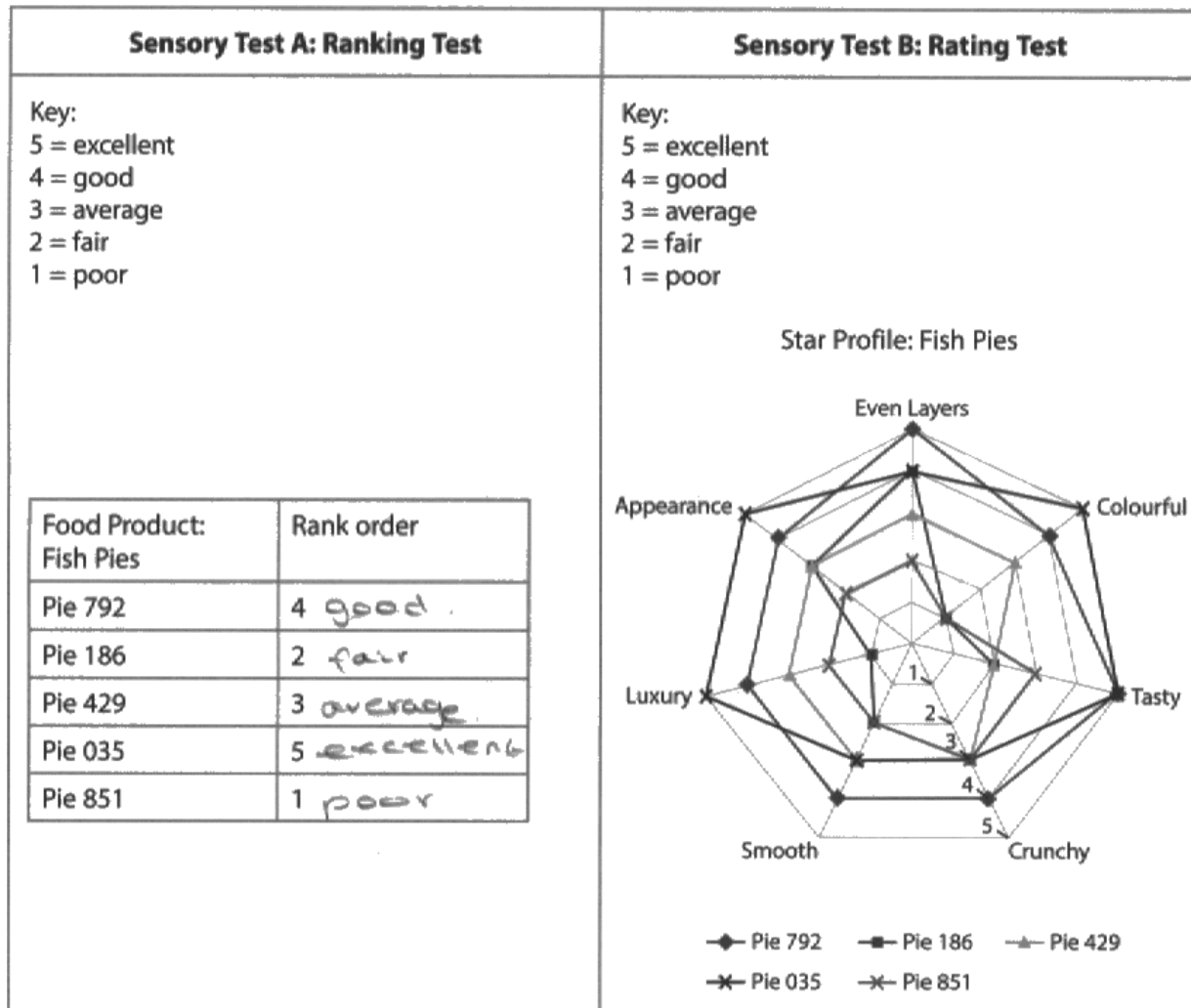
This is an area which centres could and indeed do need to practice. Most candidates started by

copying out the question, or stating the obvious (A is ranking B is rating) which takes 3 or 4 lines. Candidates were preoccupied with the ease of reading B over A or giving descriptions of the tables. Clearly not a well understood/taught topic, probably as it is subsumed into coursework and not thought of as a theory topic?

Candidates need to learn how to respond to this type of question and cover a range of points, rather than ramble on about one point.

*(f) A food manufacturer uses sensory testing to check the quality of products.

Below are two sensory tests.

Sensory Test A: Ranking Test	Sensory Test B: Rating Test
Key: 5 = excellent 4 = good 3 = average 2 = fair 1 = poor	Key: 5 = excellent 4 = good 3 = average 2 = fair 1 = poor

Sensory Test A:

Food Product: Fish Pies	Rank order
Pie 792	4 good.
Pie 186	2 fair
Pie 429	3 average
Pie 035	5 excellent
Pie 851	1 poor

Sensory Test B:

Star Profile: Fish Pies

- Pie 792   - Pie 186   - Pie 429
- Pie 035   - Pie 851

good.   792 = 5,4,5,4,
4,4,4

fair 186 = 4,1,2,3,2,1,3

average 429 = 3,3,2,3,3,3,3

excellent 035 = 4,5,5,3,3,5,5

poor   851 = 2,1,3,3,2,2,2

Evaluate sensory test A compared with sensory test B for use by a food manufacturer.

(6)

which is a star profile,

Sensory test A B is better than A as it gives a detailed break down of each descriptor and allows the company manufacturer to look at specific areas where they need to improve such as pie 186 was so

scored 1 out of 5 for colour so they could add colourful vegetables like peppers with the pie to improve this. Sensory test A only gives general feedback as which comments on the pies as a whole. This isn't very useful for manufacturers as it does not help to suggest areas that need improving. For example pie 851 is ranked as poor but there is no suggestion as to why. However A is easier to look at and allows the manufacturer to easily discard the

(Total for Question 13 = 16 marks)

poor ideas. A would also be cheaper for the manufacturer because it would take less time to make the chart and analyse it.

Question 14 (a)

Generally, disappointing responses for this question, with many misreading the question and focussing on cleaning systems in the food kitchen (washing floors, sterilising equipment, dish washing eating utensils) rather than food preparation techniques (the stem read: 'Food preparation is the method of preparing ingredients into food'.)

14 Food preparation is the method of preparing ingredients into food.

(a) Describe **two** cleaning processes used in the food industry as part of food preparation.

(4)

Process 1

Washing - the food is washed under water to remove any physical hazards e.g. dirt

Process 2

Peeling - the skin of the fruits and veg. is removed as it may contain bacteria.

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Examiner Comments

Cleaning processes was well answered by most candidates – they knew about washing and the different types that exist e.g. wet, dry, spray and even peeling.

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14 Food preparation is the method of preparing ingredients into food.

(a) Describe **two** cleaning processes used in the food industry as part of food preparation.

(4)

Process 1

Sieving to remove unwanted large material and to remove clumps eg in flour

Process 2

Spray washing to remove dirt with a on single objects powerful jet of water eg fruit apples

Question 14 (b)

This was a poorly answered question with lots of misunderstanding. In the main most candidates incorrectly stated blanching was a method of cooking. Some thought it was the opposite to a browning process.

Where candidates wrote a good answer, they generally focussed on the short heat treatment used to prepare vegetables before freezing or canning.

The outstanding answers tended to focus on inactivation of enzymes, removing surface bacteria and shrinking the product.

(b) Explain **one** use of blanching during food preparation.

(2)

to inactivate enzymes, In food so that no bacteria grow and that no more chemical reactions take place

(b) Explain **one** use of blanching during food preparation.

(2)

Blanching is used in the during food prepartion to shrink the product in size and make suitable for freezing. Blanching is often used on vegetables.

Question 14c

Again, this was very poorly answered with lots of candidates guessing the answer or leaving it blank. Correct answers included a named vegetable.

Question 14d

This question was misinterpreted by the majority of candidates who gave responses pertaining to storage or preservation methods rather than considering the principles of food preservation. About 15% of candidates left this question blank. Those that did get marks usually got 1 – 2. There was a lot of overlap for their 2 responses which limited the marks gained. The most popular correct response was "extend shelf life". Few candidates were able to show point and explain and most that got 2 marks did so for making 2 points.

(d) Describe **two** principles of food preservation.

(4)

1 To extend the shelf life of a product.

2 To stop a product from going out of date.

ResultsPlus
Examiner Comments

Many responses included extending shelf life and creating unfavourable conditions for micro-organism growth as their main points. There did seem to be some confusion at times with some talking about methods of preservation instead of the principles of preservation.

(d) Describe **two** principles of food preservation. Shelf life +

(4)

1 To extend the shelf life. This makes sure the product remains at a high quality for a long length of time

2 Stops the food from perishing which is wastful. Food preservation should keep the food from 'going off'.

Question 14 (e)

This question was a challenging A/A* question and answered with varying degrees of success. Weaker candidates generally incorrectly cited CAD/CAM techniques with no relevance to the question. Meat analogues, nutraceuticals and additives tended to fair better, with our A/A* candidates exploring the issues of biotechnology, GM crops and nanotechnology. In these caes, the answers were a pleasure to read and this is clearly an area of the specification that offeres real scope for stretch and challenge of our most able candidates. Technical understanding, good use of vocabulary and terminology linked to food technology as well as excellent application of knowledge and understanding were demonstrated, and often the B grade canaidate achieved 3/6 marks with much credible discussion on technological developments.

This question was also left blank by several weaker candidates. Others that gained 0 marks did so by just re-writing out the question without making any valid points. As with question 13e, the full range of marks was given for this question. Weaker candidates getting 3 marks or so for making different valid points with little discussion. Handwriting was again a major problem. Some centres had clearly taught this question well with many centres 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. 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.

This was generally a well answered question and candidates knew what the answers entailed. They communicated the information effectively and were able to explain it well. Some candidate's answers were very detailed and would have achieved more than 6 marks if there were more marks to obtain!

(e) Technological developments used within the food industry have created new food products.

Discuss how the technological developments and the new food products meet the needs of the consumer.

(6)

Technological developments such as machinary used in batch production has reduced costs due to fewer workers being needed. This means food can be made cheaply so customer needs are met.

CAD (computer aided design) allows products to be modelled and analysed and helps the production of new food products such as new flavours and fusion foods to be thought of and created. This creates a larger range of food which is useful for people like picky eaters or even vegans who have limited food choices. New developments make products suitable for diabetics (artificial sweeners), coeliacs (gluten free) and lactose intolerant people. This gives them more choice and meets their needs.

(Total for Question 14 = 17 marks)

TOTAL FOR PAPER = 80 MARKS

We can use biotechnology and GM crops to produce food all year round which are normally seasonal. We can also use technology to fortify food so it has all the nutrients consumers need.
We can make crops pest resiscant so less crops are wasted and we can feed more people.

This question was left blank by several candidates. Others that gained 0 marks did so by just making irrelevant comments about technology. Many candidates misinterpreted this question discussing the use of machinery and computers in food production. Weaker candidates got 2-3 marks or so for making different valid points with little discussion. Handwriting was again a major problem with tiny lettering or rushed scrawl being extremely difficult to read. 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. Again this year, many candidates used more than the space provided which should be discouraged in future.

Most popular correct answers were regarding meat analogues such as quorn for vegetarians; developing foods suitable for diabetics or lactose intolerant people; fortification of foods to provide extra nutrients; genetic modification to enhance yield, survive poor conditions like drought or make food available year round. Very few also showed any subject knowledge about nano-technology or smart food materials.

(e) Technological developments used within the food industry have created new food products.

Discuss how the technological developments and the new food products meet the needs of the consumer.

(6)

People such as vegetarians who don't consume meat are now able to eat meat substitutes such as Quorn, which opens a whole new market. They can now still be provided with the protein etc that they need, just through a product suited to them.

Technological developments that are able to remove som fat from certain products are now suited to obese people who have to cut down on fats in their diet to remain well.

Technological developments have also been able to alter the lactose fat in some dairy products making them suitable for the consumer if they are lactose intolerant. For example Lacto-free chocolate.

Rather too many blank pages and those that did try, again wasted time and space repeating the question. CAD and CAM featured often but the responses were not focussed on the consumer, but rather on the farmer or the manufacturer. There was knowledge of GM and it was a popular response, although the knowledge was rather superficial, but adequate to gain 2 and sometimes more marks.

This response was in the level 3 marking criteria for QWC.

Paper Summary

Candidates are reminded to keep their answers within designated areas and use concise sentences or bullet points where appropriate.

'Explain' style questions continue to cause problems for some candidates and teachers are advised to prepare candidates in the use of the following command words:

• Give, State, Name (1 mark) - These type of questions will usually appear at the beginning of the paper or question part and are designed to ease candidates into the question with a single statement or short phrase for one mark.

• Describe, Outline (2+ marks) - These types of questions are straight forward. They require candidates to describe something in detail. Some questions may also ask candidates to use notes and sketches, therefore, marks can be gained with the use of a clearly labelled sketch.

• Explain, Justify (2+ marks) - These types of questions require candidates to respond in a little more detail – single statements will not achieve full marks. A valid point should be made and then justified.

• Evaluate, Discuss, Compare (4+ marks) - These type of questions are designed to 'stretch and challenge' candidates. These questions require candidates to make a well balanced argument, usually involving both advantages and disadvantages.

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 students 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. More centres made use of scribes or readers and the number of scripts that were illegible was greatly reduced this year. However, 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.

5FT02 paper requires candidates to answer 14 questions in 90 minutes.

The multiple choice questions and short answer questions showed levels of differentiation. Candidates would benefit from practicing this format regularly, they make great lesson introductions, plenary and homework exercises. Short, concise answers tended to fair better than lengthy responses that were too wordy or indeed 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. Additional pieces of paper are unhelpful to the marking process, and 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.

Additionally, some of the technical questions relating to food processing techniques (blanching, cleaning techniques, methods for heat transference, cooking methods) and nutritional understanding (fish and meat) were incorrect or vague. Centres must focus on technical understanding, to enable candidates to access the higher marks. The savoury salad design question was very well received, and significant improvements have been seen with the quality of sketched and written communication by candidates. The extended writing answers were problematic for some candidates because they failed to read the question or

plan their answers well. Use of terminology was disappointing this year in the extended writing questions, and candidates failed to gain marks where they presented vague, superficial answers. The coverage of the specification is well documented in past papers, and it would serve centres well to ensure they cover the full specification during the two year course in order to give their students the best chance of success in the examination component.

Summary:

Centres are continuing to make very good progress with the delivery of the GCSE Food Technology specification, and

have a good understanding of the requirements of the GCSE course, thus allowing their candidates to access the full range of marks available.

Paper Summary

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

Describe / explain type question require more practice. Candidates must support their answers with examples and linked responses in order to access the full marks available

Candidates should pay attention to the questions that assess Quality of Written Communication

There is enough space provided in the question paper for your answers. Always plan your answers carefully and if you need more space, use additional sheets.

If you use additional paper, annotate this in the margin next to your answer and then continue onto additional paper.

Familiarise yourself with the format of the multiple choice questions and practice these type of questions regularly.

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.

This 2014 paper performed well and produced highly effective differentiation for our candidates.

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