

# Examiners' Report Summer 2008

GCE

## GCE Design and Technology - Food Technology (8111/9111)

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Summer 2008

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Principal Moderator's Report summer 2008  
GCE AS Design & Technology - Product Design  
Food Technology unit 6153/01

General observations

While there was limited evidence of imaginative and inspiring work this year, there were a lot of good sound scripts. Interesting work was presented on topics such as Desserts for a Thai Wedding, East meets West in Fusion Party Food and Children's Sweet Fish and Chips served with a Fruit Dip. There was an obsession with childhood obesity, healthy dishes and '5-a-day'. While very valid topics, they were often poorly handled with quite inappropriate dishes selected in criterion B and/or developed in criterion C. In some scripts even at the upper end of the cohort, there was limited understanding of Nutrition, Food Science and functionality of ingredients resulting in, for example, quite energy dense products being developed for a healthy dessert e.g. chocolate fudge cake and chocolate sauce. Several candidates worked on 'Superfoods' - a difficult and limiting choice. Health related topics (coeliacs, lactose intolerance, diabetes etc) were still popular, but many candidates found them difficult when developing and evaluating their ideas.

Administration

- Almost all work arrived on time, most CABs and Optems were completed correctly but there were still several arithmetic errors or incorrect transfers from CAB to Optems.
- A few centres used old CABs or A2 CABs, making moderation difficult.
- AS and A2 work sent in same parcel caused difficulty, as did all of a centre's DT scripts arriving in one parcel. Each material area should be sent separately and clearly marked.
- Annotation in CABs varied from excellent to non existent. There were examples of page references in the annotation having little relevance to the page numbering on the script. More than one centre assessor referred to script page numbers in the CAB, but the work was **not** page numbered! This raises concern about the accuracy and diligence in centre marking.
- Some scripts were submitted unbound, some in a paper clip, some were loose and some unidentified with the candidate's name, candidate number or centre number. In one instance the moderator was unable to sort out the loose pages of work or attribute it accurately.
- CABs should not be attached to scripts.
- Several scripts exceeded the recommended page limit of approximately 25 A3 pages.
- One centre submitted A4 folders.
- Several scripts contained flaps. A number had several pages in one poly-pocket. This is not acceptable presentation and makes moderation very slow.

### Criterion A:

Mood boards were in abundance and generally useless with only a few sufficiently annotated to have meaning or to progress the work. Some candidates continued to produce vast amounts of irrelevant research - especially secondary research which was not used again in the project. Centres should guide candidates to a range of controlled, selected and useful research specifically related to the brief. One disassembly of a **relevant** product is sufficient. Candidates should be encouraged to consider what each piece of research will contribute to the progression of the work. Some candidates provided scant, superficial and limited research and many centres were too generous in this criterion. Centres are **again advised not to include empty packages or samples of ingredients** when submitting coursework.

The brief should be clear, the need specific and justified, the research analysed and summarised and the findings used to inform a tight specific specification which has a manageable number of **measurable** outcomes. The specification, therefore, should never appear before the research. Frequently specifications were weak, unusable and/or seldom referred to again in the work.

Where candidates had identified a client group and used them for evaluation throughout, projects almost always scored highly.

This was the criterion where most moderators found over-marking.

### Criterion B:

There were some good responses here, but many failed to evaluate against the specification. There tended to be less confusion between criteria B and C this year, but some candidates continue to select, make and evaluate a range of spurious and unrelated dishes. Candidates scored higher marks when they chose a range of imaginative and appropriate ideas and then selected a range of 5 or 6 to make and evaluated each objectively against their specification. Photographic evidence is vital, as is evidence of actual testing. Candidates should use metric measurements - not imperial or cups or a mixture of all 3 in recipes!

### Criterion C:

While moderators saw some superb developmental work from those who fully understood the design process, some complicated the work by developing more than one design proposal and this often resulted in confused and superficial modifications that demonstrated limited understanding of functionality of ingredients or the effect of processes and so the work was hard to follow. Some higher level candidates produced very concise and well planned experimental work to progress the development. There were lots of star profiles using organoleptic points. This is fine but there must also be evaluation against the specification. There was much unnecessary, unanalysed and unattributed nutritional analysis. Some centres awarded marks when there was no development to be found. Development should move the design process forward and is not just a series of very minor adjustments such as cooking 1 minute longer or sprinkling with parsley. Modifications should give enough detail to show what was changed, why and with what result. Sometimes it was really difficult to know what was being changed. If it is claimed that a component such as pasta or marzipan has been made, there should be evidence of that process.

#### Criterion D:

This criterion tended to be very well executed. When high level scores were awarded, candidates provided detailed time-bonded production plans and sophisticated HACCP, quality assurance, quality control, costing and scaling up **for the final product only**. Some candidates spent too much time including these details for all their dishes or produced generic HACCP. Thumbnail pictorial evidence of making the final product showed planning and making. There were several examples of detailed but unnecessary packaging development presented as industrial application.

#### Criterion E:

Generally this was a better section this year with many centres taking on board suggestions regarding demand, precision and high level making skills and some candidates produced excellent high order work. The more detailed photographic evidence the candidate can provide, the easier it is for moderators to see how marks have been awarded by the centre. A number of candidates were moderated upwards in this criterion, the centre having marked harshly. In a small number of scripts no photographic evidence of making could be found in the folder or the CAB therefore **no marks** could be awarded in this criterion. From the detail provided in a significant number of scripts it would not be possible for the reader to replicate the product. This is a serious flaw in a design and make project folder. There continued to be some poor garnish/decoration, finish and presentation. A final product photographed on a baking tray or cooling rack which is sitting on the hob fails to impress any moderator. Black and white, blurred or miniscule photographs are not helpful.

#### Criterion F:

Responses were disappointing where specifications were weak in criterion A and/or ignored in criteria B and C evaluations. Nor is this criterion intended to be simply a summary of what was done in the project. This approach was seen at the weaker end of the cohort. Candidates disadvantaged themselves by ignoring their final product in relation to fitness for purpose, the specification, the brief and findings resulting from all of their work. Final evaluations were often rushed. Some centres, however, had mastered the testing process with taste panels, food probes, testing booths, regular reference to client group in criteria Band C and then again in F with imaginative suggestions for further development of the final product. Objective evaluations are needed throughout to access top marks.

#### Criterion G:

All moderated projects were appropriate and should have been awarded full marks. Only a small number of centres misunderstood this criterion.

#### Criterion H:

Most centres appeared to understand the requirements of this criterion and so only a few adjustments were needed. Where old CABs were used centres had not credited their candidates.

## Principal Examiner's Report summer 2008

### GCE AS Design & Technology - Knowledge and Understanding of Product Design Food Technology unit 6154/01

The quality of the responses to this year's examination was generally disappointing. Most candidates scored in the mid thirty (30) marks region, this is less than half marks. A number of very good candidates scored marks in the forty (40) plus region. There were also a number of candidates who scored in the low twenty (20) mark region. This leads the examiner to question the ability of a number of candidates in taking this exam at AS level.

It was evident from the responses that candidates showed a lack of knowledge and understanding of the functionality of specific additives within a selected product; the concept of Hazard Analysis Critical Control Point (HACCP); and industrial preservation processes. Some candidates referred to domestic situations when the subject and therefore the paper are referring to the food industry. A large number of the responses were GCSE standard, too general, vague and not well thought out.

#### Question 1(a)(i)

This question refers to the two industrial processes of sorting and grading.

1(a)(i). This question required candidates to name two physical categories that food materials could be sorted into for example weight, colour, size and shape. This question was very well answered with a large number of candidates scoring the full two marks.

#### Question 1(a)(ii)

This question required candidates to give three reasons why raw food materials are sorted into different physical categories. Most candidates scored at least one/two marks out of a possible three. However a large number of candidates scored badly as they confused grading with sorting. Too many responses were too vague e.g. 'all colours/sizes are the same', with no justification provided to enable them to score the full marks.

#### Question 1(b)

This question required candidates to describe what occurs when fresh produce is graded. This question was generally well answered. Most candidates scored at least one/two marks focusing in on the quality aspect of grading. Again confusion over grading and sorting was evident. The examiner is looking for the grading process to be described. Why/how is it used? Many responses were too general, e.g.: 'sorted by hand', with no reason given. Some responses lacked detail/justification.

### Question 2(a)(i)

This question refers to size reduction and mixing in the preparation of raw food materials in the food industry.

This question required candidates to give two examples of size reduction. Most candidates scored the full two marks available for this question, providing responses such as: dicing, slicing, grating etc. Size reduction is primarily a primary process; only a small number of candidates gave secondary processes such as: blanching, dehydration which resulted them not scoring any marks.

### Question 2(a)(ii)

This question required candidates to name two raw materials which are difficult to reduce in size. A reasonable number of candidates scored at least one mark out of a possible two.

Today, most raw materials can be reduced. However, fibrous, elastic and viscous materials such as meat, fish, eggs, doughs were the main materials that are difficult to reduce.

### Question 2(b)

This question required the candidate to explain two considerations necessary when using machinery for mixing dough and paste. This question was badly answered due to the fact that candidates miss-read. The vast majority of candidates referred to considerations when using pastry and not the machinery. Responses such as: correct mixing time, adding liquid or over mixing were incorrect. The pastry is being made in the food industry so the above issues would already be sorted out. The food industry knows how to make the pastry. Referring to cleanliness, hygiene and operating instructions were also not credited. The examiner wanted the machinery to be discussed, as this would be a consideration for the food industry. Therefore using Z blade mixers to ensure consistency / to reach dead spots were the type of responses required. Where candidates scored one mark but failed to gain the second was due to no justification. Most candidates scored no marks, with a few gaining one mark out of a possible four marks. Very good candidates scored two marks plus.

### Question 3(a)

This question required candidates to name and outline two main consumer rights. This question was generally well answered with a large number of candidates scoring the full four marks. Where candidates lost marks was due to either not justifying the named consumer right or outlining the benefits but not naming the right. Some candidates repeated the same right by giving two different examples. This can only be credited once. Overall, a well answered question.

### Question 3(b)

This question required candidates to give four reasons why purchasing and consumption are becoming increasingly fragmented. Again a well answered question with a large number of candidates scoring three/four marks out of a possible four marks. Some candidates failed to understand that fragmentation was the focus of the question and therefore answers such as media, economy and religion were not correct. Some candidates repeated responses but can only be credited once.

### Question 4

This question required candidates to explain why particular additives were in a given product. In general all parts to this question were badly answered. Candidates clearly showed a lack of knowledge about named additives. Candidates failed to apply the named additive to the product and discussed the additive in general terms. Vagueness was also another problem, referring to nice appearance, taste, mouthfeel, attractiveness and make product appealing were not credited.

#### 4(a)(i) Emulsifier (in pastry)

This question was very badly answered because candidates failed to understand the function of emulsifiers in pastry and discussed emulsifiers in general. Candidates referred to preventing the oils and liquid separating, we are talking about pastry here, not an emulsion e.g. mayonnaise. The examiner was looking for dough conditioner, facilitating aeration and improving structure and texture. A very few candidates scored one mark but the majority scored zero marks out of a possible two marks.

#### 4(a)(ii) Modified maize starch (in custard)

This question was generally better answered with most candidates scoring at least one mark by referring to thickening. Very good candidates scored the full two marks by mentioning that syneresis/separation could be prevented.

#### 4(a)(iii) Gelling agents

There was an average response to this question. Most candidates scored at least one mark out of a possible two marks. Most of the responses referred to gelling agents helping to gel the custard and glaze. Good candidates justified their response by explaining how gelling agents worked, and this was credited. However where candidates failed to gain marks was by stating the obvious, 'gelling agents gel' or that the gelling agent was the glaze on top of the product. Gelling agents have many functions within this product but very few candidates knew this.

#### Question 4(b) Acidity regulator

Generally the responses to this question were poor. Most candidates scored at least one mark out of a possible four marks. As with the previous question candidates stated the obvious, regulates the acidity, however if the answer was justified, then it was credited. Also candidates went into too much detail on pH; this can only gain one mark. Again an acidity regulator has a number of functions within this product but very few candidates knew this.

#### Question 5(a)

This question required candidates to give two functional properties of additives. A large majority of candidates scored the full two marks. Candidates could either provide the named functional property e.g. changes physical characteristics or provide an example e.g. modifying the texture / make texture thicker. Generally a well answered question because candidates could provide their own additives.

#### Question 5(b)(i)

Surprisingly the responses to this question were very disappointing. Xanthan gum has appeared on numerous occasions over the past few years and should elicit good responses. However, most candidates scored only one mark out of a possible four marks. Most candidates mentioned thickening for one mark and some candidates scored an extra mark by explaining how the gum thickened e.g. absorbs water. Very few candidates referred to the thixotropic properties, rapid flavour release, and ease of removal or aids production.

#### Question 5(b)(ii)

This question required candidates to choose two additives and outline the effects of the named additive. The responses to this question were generally very good. A large number of candidates scored the full four marks. Where candidates failed to score the full marks was by failing to name an additive, outlining its effects or giving the additive but incorrect effect. Maybe because candidates could choose their own additives reflects the good marks awarded. Some candidates chose very simple additives e.g. named colours / flavours; others chose chemical names, E numbers. A good question all round.

#### Question 6(a)

This question required candidates to name the three micro-organisms which are of particular significance in food technology. Most candidates scored the full three marks by stating: bacteria, moulds/fungi and yeasts. Where candidates lost marks was by naming three bacteria e.g. *Salmonella*, *E.coli* and *Bacillus cereus*; referring to contamination in general terms e.g. physical, chemical or failing to name one or more of the micro-organisms.

### Question 6(b)

This next question was divided into three parts with the third part requiring two separate responses. Candidates were required to name a food poisoning bacterium, outline the type of food poisoning caused and to name a source and food commonly associated with the named bacterium. Most candidates scored at least two from a possible four marks for this question. Most marks were awarded for naming the bacterium and a food commonly associated with it. Some candidates lost marks because their named bacterium and sources/foods did not link.

#### Question 6(b)(i)

Most candidates scored the full one mark for this question by naming a bacterium associated with food poisoning. Common responses were *salmonella*, *E. coli* and *Listeria*. Some of the spelling was far from correct and, unless the answer was clear, it was not credited.

#### Question 6(b)(ii)

This question required the candidates to outline the type of food poisoning caused by the named bacteria. It is obvious from the responses that candidates miss-understood what was required but understandable. The examiner was looking for infective, toxin types of illness. But candidates referred to vomiting and diarrhoea which are symptoms. Very few candidates mentioned infections or toxins.

#### Question 6(b)(iii)

This question was in two parts, candidates had to name the main source and foods commonly associated with the named bacterium in part (b)(i). Naming the source proved difficult as candidates gave food sources which are only relevant in a few cases. Most sources are: human/animal intestines, soil, spores in dirt, flies, human skin, and cross-contamination. However, food sources such as untreated milk, cereal grains were credited if related to the correct bacterium. Naming a food commonly associated with the named bacterium was answered well. Most candidates got the one mark for naming a correct food. Overall for this part of the question most candidates scored one mark out of a possible two marks. Very good candidates scored the full two marks.

### Question 6(c)

This question required candidates to identify five of the basic seven concepts in HACCP. Considering that candidates would have done this (in general terms) for GCSE and certainly in more detail for AS, the responses were generally disappointing. Candidates who were clear about HACCP, outlining that it is a process, established to identify, control and prevent hazards and that monitoring, corrective action, verification and documentation are essential components scored the full five marks. Some candidates failed to explain the concepts, failing to get the full marks but some credit was given if the understanding was evident. Too many candidates referred to health and safety issues, store the food, clean the premises and wash your hands. Although health and safety are implicit within HACCP, for example as control / preventative measures, they are not in themselves a basic concept.

### Question 7

This question was in three parts and focused on drying as a preservation process. All three parts were extremely badly answered and considering that processing is implicit within the specification, the answers were frankly dismal. Quite simply candidates did not have a clue about any of the processing techniques mentioned. Processing techniques have appeared in some format in previous questions and should not come as a surprise. Overall out of a possible total of twelve marks the majority of candidates scored one / two marks. A few good candidates still only scored low single marks.

#### Question 7(a)

This question required candidates to outline four advantages of freeze-drying food products. A small number of candidates scored one/ two marks out of a possible four marks by mentioning little nutrient loss, few flavour changes or produces a high quality product. Where candidates failed to gain any marks they were referring to generalisations, such as: extends shelf life, kills bacteria and keeps product fresh.

#### Question 7(b)

This question required candidates to describe the accelerated freeze drying process. Very few candidates scored one mark with the majority scoring zero. Candidates referred to the freezing process being speeded up, this is not AFD. Obviously the word accelerated lead many candidates to this conclusion but it is freeze drying not freezing. Sublimation was the focus here, moving from a frozen to dried product for example ice converting to water vapour without melting.

### Question 7(c)

Again this question was also very badly answered with the majority of candidates scoring zero. Candidates referred to spray cleaning, spraying products with liquid nitrogen and drying products with blasts of cold air. Spray drying is basically dehydration, turning a liquid into a powder and the process used to do this.

### Question 8

This question was in four parts and referred to proteins. Overall the question was generally well answered, with a good number of candidates gaining at least half marks out of a total of twelve marks. Where candidates failed to gain marks were due to them referring to fats or sugars or not providing enough detail to justify for their explanation.

#### Question 8(a)(i)

This part of the question required candidates to describe the primary structure of protein. A large number of candidates scored the full two marks by referring to the amino acid arrangement, linked by peptide bonds. Most candidates scored at least one mark.

#### Question 8(a)(ii)

This part of the question required candidates to describe the secondary structure of protein. A large number of candidates scored at least one mark by stating that the primary structure folded to form a spiral/helix. This question was worth four marks and very good candidates went on to explain the forming of disulphide bridges, hydrogen bonding and electrostatic attraction. Some candidates went on further to explain the tertiary structure but this was not required and therefore not credited. Overall, this question was reasonably answered.

#### Question 8(b)

This question required candidates to explain how the biological value of protein was determined. A large number of candidates referred to both high and low biological value and scored one mark. However, in order to gain the full three marks a good explanation was required and many candidates failed to do this. Candidates needed to refer to essential amino acid content, capable of promoting growth and repair of tissue cells and that the body could not synthesise these essential amino acids and required them from a diet.

#### Question 8(c)

This question required candidates to explain the term denaturation and to identify one factor which influences this reaction. This question was worth three marks and most candidates scored at least one if not two marks. Denaturation of both proteins and enzymes were accepted (as enzymes are protein in nature). Two marks were available for explaining the term and one for identifying one factor. Most candidates scored at least one mark by explaining that either the protein structure changed or enzyme became inactive. A large number of candidates failed to gain the second mark because they failed to further explain the term e.g. unfolded molecules bond with each other - resulting in coagulation. Most candidates scored a second mark by giving a correct factor e.g. heat, acid. Candidates over explained this part but could only gain one mark.

**Principal Examiner's Report summer 2008**  
**GCE A2 Design & Technology - Further Study of Product Design**  
**Food Technology unit 6155/01**

Generally, questions were answered at a good standard with almost all questions attempted by candidates. Very few candidates failed to attempt a question at all. The ramping of questions worked well in this paper. Candidates appeared to be well prepared for this paper and there were few irrelevant or superficial answers.

**Comments on individual questions**

**Question 1(a) Moulds in cheese**

Many candidates answered this satisfactorily, many receiving more than 2 marks. A large number included taste as one of their answers which was not accepted.

**Question 1(b) Decay in fruit**

Generally candidates understood this but descriptions were not always clear and included such statements as 'oxidation' without further explanation.

**Question 2(a) Developing new products**

A wide range of answers was acceptable, many stemmed from sociological, political, family and behavioural issues. Most students answered satisfactorily.

**Question 2(b) Quality of design**

In contrast to part (a) this question was poorly understood and few candidates obtained good marks. Weaker answers tended to reiterate aspects which were in part (a). Few candidates linked knowledge of consumers' preferences and a united approach from all parts of the company to meet these preferences.

**Question 3(a) Design of new desserts**

This part was answered well by all candidates, with some imaginative solutions.

**Question 3(b)**

This part of the question had variable responses some being repetitive eg in reducing fat levels.

**Question 3(c)**

A large number of groups of additives were acceptable answers; individually named additives were not acceptable. As a result many candidates received full marks.

### Question 3(d)

A number of candidates thought that certain additives could be used to achieve preservation, however, the majority answered correctly but not fully with answers such as freezing. Those who chose chilling frequently gave incorrect temperatures. No one referred to the need to avoid fluctuating temperatures during frozen storage.

### Question 4(a) Changes in animal muscle after death

A very well answered question. Most candidates had a very good understanding and often explained more than two changes in a lot of detail.

### Question 4(b)

Many candidates answered correctly on post-mortem changes in fish. There were some technically detailed answers of a high standard, giving detail of complex chemical changes.

### Question 5(a) Moisture affect on cereal grains

Most candidates could answer this, many stressed that high moisture levels were to blame for changes in grain.

### Question 5(b) Deterioration of grain

Most candidates gained 2 marks and referred to growth of mould and smell. Very few referred to enzymes being produced, and although some stated that starch is broken down, no candidate mentioned dextrans.

### Question 5(c) Use of cereal based ingredients

Candidates did not appear to understand the word 'evaluate' and simply wrote any facts they thought might be relevant. Most who gained marks referred to it being possible to modify starches and that this would prevent syneresis. Few gave any of the disadvantages of flour.

### Question 6, Vitamins

Many candidates had a detailed knowledge of vitamins. Several referred to just vitamin B (no sub-group), many gave minerals and some fats, proteins and carbohydrates. Most marks were lost on outlining the main nutritional contribution to the diet. There were a number of answers giving sources of the vitamins rather than contribution to the diet.

### Question 7(a)(i) Dairy products

Most candidates knew the importance of calcium in bones and teeth but few knew the link with vitamin D.

### Question 7(a)(ii)

This was well attempted, although the need to give the correct vitamin B was an issue, for example B2. A large number of candidates included carbohydrates as the answer which was not acceptable.

### Question 7(b)(i)

Many candidates mixed up the chemical and physical nature of casein. Several knew that the casein exists as micelles but none mentioned these were colloiddally dispersed.

### Question 7(b)(ii)

This part was better answered but few knew that the proteins contained phosphates.

### Question 8(a) Gelling agents

Some gelling agents were better known than others. Alginates and their egg-box model were mentioned but not usually very well explained. Starches were a common answer, but the role of hydrogen-bonding was usually excluded. There were confused explanations about the gelling of gelatine. When pectin was mentioned the right type of pectin needed ie high methoxyl was omitted. Some candidates mentioned xanthan gum and better candidates knew it had to work in conjunction with guar or locust bean gum.

### Question 8(b) Thickening quickly without heat

Few answers included pre-gelatinised starch and none mentioned the process being affected by other ingredients.

### Question 8(c)(i) Rapid flavour release

Many candidates did know about this and included comments about salt, spices and other flavours. The only answer acceptable was being Xanthan Gum.

### Question 8(c)(ii)

The mechanism of flavour release due to chewing breaking the gum down was understood only by the more able candidates.

**Principal Examiner's Report summer 2008**  
**GCE A2 Design & Technology - Commercial Product Development**  
**Food Technology unit 6156/01**

**General observations**

Moderators felt there was a general improvement in the performance this year. Innovative topics included work on Savoury Ice cream, A Savoury Cheesecake, A Step-by-Step Meal box and A Dish for the Crew of an Oil Tanker.

A number of candidates made life extremely difficult for themselves because of their chosen brief which was often far too broad/complex, e.g. a dish for a lactating lactose and gluten intolerant 19-23 year old or unrealistic when dishes using locally sourced components were to be sold through major national supermarkets with no research to support the notion that the outlet could/would market the product locally. Candidates often forgot the brief after page 1 and went on to produce unsuitable products - low fat dishes containing flaky pastry, a simple apple crumble for a luxury dessert or fair trade/organic products with no indication that such components had been used or compared with the conventional components. Butter icing and whipped cream were incorporated into products for the lactose intolerant. Dishes targeted at age groups such as 18-29 year olds are rather meaningless. However, dishes for the very young or very old with their particular needs/circumstances are perfectly valid. There was widespread excellent use of clients, but some candidates continued to not justify their choice of client/target group, nor did they identify them. Some identified them, but made minimal reference thereafter.

**Administration**

- All work arrived on time, most CABs and Optems were completed correctly, but there were some arithmetic errors in CABs or incorrect transfers from CAB to Optems.
- AS and A2 work sent in same parcel caused difficulty, as did all of a centre's DT scripts arriving in one parcel. Each material area should be sent separately and clearly marked.
- Annotation in CABs was generally helpful to moderators. Centres should realise that the more detailed their annotation, the easier it is for moderators to see their thinking behind the marks.
- CABs should not be attached to scripts.
- Several scripts exceeded the recommended page limit of approximately 25 A3 pages.
- Several scripts contained flaps. This is not acceptable presentation and makes moderation very slow.

### Criterion A:

This was by far the weakest criterion. Some candidates continued to produce vast amounts of irrelevant research - chunks lifted from texts or the internet, and primary as well as secondary research findings not sustained throughout the remainder of the project. Centres should guide candidates to a range of controlled, selected and useful research specifically related to the brief. Questionnaires were sometimes far too simple and non specific. Useless/unused questions on age, gender etc still appeared. Each question should be relevant, specific to the brief and used to further the research process. One candidate said 'a fair few people completed the questionnaire' - the exact number should be stated. Another candidate's client said the greatest need for the coffee shop was a new cake selection and the candidate proceeded to develop biscuits. One disassembly of a relevant product is sufficient. Candidates should be encouraged to consider what each piece of research will contribute to the progression of the work. Some candidates provided superficial and limited research and many centres were too generous in this criterion. **Centres are again advised not to include empty packages or samples of ingredients when submitting coursework.**

The brief should be clear, the need specific and justified, the research analysed and summarised and the findings used to inform a tight specific specification which has a manageable number of measurable outcomes. The specification, therefore, should never appear before the research. Frequently specifications were weak, unusable and/or seldom referred to again in the work. Too many complex specification points made evaluation against the specification extremely difficult. High scoring projects were where candidates identified a client group and used them for evaluation and advice throughout.

### Criterion B:

This was a much improved criterion this year with often a wide range of ideas generated, 5/6 of them selected for making, intensive evaluation against the specification and a final decision made for the dish to be developed in criterion C. Many candidates made this decision in conjunction with their client. The majority of candidates showed clear understanding of the differences in requirements between criteria B and C. Photographic evidence is vital, as is evidence of actual testing.

### Criterion C:

Excellent developmental work was produced by those who fully understood the design process. Top scoring candidates produced very concise and well planned experimental work to progress the development, thus saving time and cost. Star profiles using organoleptic points were a much over-used method of evaluation usually resulting in a neglect of evaluation against the specification. Some centres awarded marks when there was minimal or simplistic development and moderators could not support the centres' marking. Changing banana to grapes or adding salt does not constitute real development. Candidates **MUST** clearly and simply indicate what is being changed, why and with what result.

#### Criterion D:

This tended to be the most consistently good criterion. When high level scores were awarded, candidates provided detailed time-bonded production plans and specific HACCP, quality assurance, quality control, costing and scaling up for the final product only. Some candidates spent too much time including these details for all their dishes or produced generic HACCP. A number of candidates continue to present crazy costing and many ignored the industrial costs involved in manufacture. Often it was impossible to know whether costs given were for the whole dish or one portion or if labour/overheads and profit margins were included. Pictorial storyboards were well used providing good evidence of making the final product and showed careful planning. One candidate produced a very useful and detailed diary of all contact with the client.

#### Criterion E:

This criterion continued to vary in the standard of product making. It was here that there was most evidence of over-marking. Some centres still do not appreciate the importance of high quality CAB photographs. However wonderful the product(s) were judged to be by the centre, if the photographic evidence in the folder does not support it, the moderator cannot agree centre marks. Some centres appear to have limited understanding of what a 'high quality' product should look like at this level and the full 40 marks were awarded for very poorly made, roughly finished and unattractively presented products. At A2 a real professional finish is required for top marks.

#### Criterion F:

Where criteria A, B and C included testing with user groups, field trials and feedback from clients, scoring was high in this criterion. There was some excellent work on storage tests, temperature tests, sensory tests and objective evaluation against the specification. Objective evaluations are needed throughout to access top marks. Weaker candidates tended to summarise their work as final evaluation rather than reflecting critically on the developmental process and making valid imaginative suggestions for further development.

#### Criterion G:

All moderated projects were appropriate and should have been awarded full marks. Only a small number of centres misunderstood this criterion.

#### Criterion H:

Most centres appeared to understand the requirements of this criterion and so only a few adjustments were needed. Where old CABs were used centres had not credited their candidates.

## Statistics

			Grade Boundaries				
			A	B	C	D	E
Unit 6153	Raw marks	115	92	82	72	63	54
	UMS	150	120	105	90	75	60

			A	B	C	D	E
Unit 6154	Raw marks	80	36	31	27	23	19
	UMS	150	120	105	90	75	60

			A	B	C	D	E
Unit 6155	Raw marks	80	43	39	35	31	28
	UMS	150	120	105	90	75	60

			A	B	C	D	E
Unit 6156	Raw marks	115	92	82	72	63	54
	UMS	150	120	105	90	75	60



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