



**General Certificate of Secondary Education
June 2012**

**Design and Technology: Food
Technology** **45451**

(Specification 4545)

Unit 1: Written Paper

Report on the Examination

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General remarks:

Candidates responded well to the paper which tests the full ability range.

The overall marks awarded reflected the whole ability range with final marks ranging from zero to full marks. It was pleasing to see good use of specialist terminology across the ability range. Improved standards of literacy were also evident for the majority of centres with an increasing number of candidates demonstrating the ability to structure their responses appropriately. However, there were many occasions where poor handwriting made it very difficult for examiners to mark candidates' responses.

It was evident that a full and detailed revision programme had been delivered in most centres but there was evidence suggesting that some centres are not covering the whole specification prior to candidates taking the written examination. Centres are to be reminded that the pre-release material is referenced to Section A only and that this along with Section B are designed to cover the whole specification. Many candidates demonstrated a sound knowledge of a wide range of topics from the specification and were able to apply this knowledge successfully to the various contexts used within the paper. Candidates who used the mark allocations to guide their responses tended to give more extended answers and, as a result, often gained higher marks. On the whole, centres need to be congratulated in continuing to meet the demands of this single tier paper and are encouraged to develop their good practice further in the future.

Aspects of the paper done particularly well or badly

Well answered questions

1ai,1aiii,1bi,1bii,2ai,2aiii,2bi,2biii,4ai,4b,5ai,5aii,5bi,

Satisfactorily answered questions

1aii,2aii,2bii,2biv,2bv,3b,3c,4c,5bii,5c,6

Badly answered questions

3a, 4aii, 4d, 5d

General quality of the work marked

QUESTION 1

The question was well answered by nearly all candidates. Even lower ability candidates were well prepared and often gained good marks.

(ai) Most candidates had been well prepared and were able to identify how the pasta salad met the advice of the eatwell plate. The most frequent responses related to the inclusion of pasta as a carbohydrate and to the fruit and vegetable content.

(aii) Usually only one mark gained. Many candidates gave the correct answer that the pasta salad did not contain any meat, fish, eggs or beans but then wrongly went on to say the salad 'did not contain protein' ignoring the cheese content. Similarly, many answers related to 'no fatty foods' ignoring the cheese, creamy dressing and croutons content. Some gained credit for correctly identifying incorrect proportions that related to the eatwell plate for example the 'high % of fat'.

(aiii) Usually well answered with candidates gaining at least 1 mark for each explanation. Many candidates simply stated 'remove cheese' and did not replace it with any other protein food whilst others stated 'add more vegetables' without giving the reason why.

Most common answers related to the use of wholegrain products to increase the fibre content or replacing ingredients to effect a reduction of fat content.

(bi) Well answered by the majority with good marks gained for the design ideas across all levels of ability. Improvements were seen in the annotation of sketches with the most successful responses linking very closely with the given design criteria. The high standard of annotation reflected candidates that were well prepared for this question. Those candidates who did not state the name of the pasta missed out on a mark as did those who used mayonnaise/salad dressings as the homemade sauce for the hot main meal. Often the homemade nature of the sauce was not evident as ingredients were not identified. Candidates who lost a mark for not naming the type of pasta or identifying nature of the homemade sauce often picked up an extra mark for additional details given about their chosen design.

(bii) The stages of making and control points were usually well answered with high marks gained by all levels of ability showing sound knowledge about the stages of making and including hygiene, safety and quality control points. Detailed and logical responses often gave information on making the pasta using pasta machines, cooking until 'al dente', making a 'roux' sauce, draining using a colander and testing using a food probe. Specialist terminology was used correctly and although a large number of control checks were evident, few incidents of 'feedback loops' were seen and some times and temperatures were vague. Centres are reminded that other vague terms e.g. the use of the words 'wash' and 'germs' are not credited whereas the more specific 'clean' and 'bacteria' are accepted.

QUESTION 2

(ai) The importance of research was well understood by most candidates with popularity of products, prices comparisons, weight and packaging related answers being the most popular. Most candidates were aware of identifying 'gaps' in the market and not producing a product that already exists.

(aii) Many candidates gave 'use of computers in research' answers without actually stating ways the computer did it e.g. websites, online questionnaires and comparative sites. Some gained marks from extended answers describing potential outcomes of using the facilities available e.g. use of consumer reviews /sales figures to inform specific new product development

(bi) Candidates either knew the correct order or guessed. Unfortunately many gave the reverse order starting with the smallest weight rather than the largest.

(bii) Candidates either had full knowledge of this or simply guessed. Few gave the correct answer of 'net weight' but the majority indicated the symbol e meant 'estimated' or 'approximately'. Those who did not know the meaning guessed the meaning to be European, Environmental, E numbers or Energy content.

(biii) Most candidates knew this was to contact the manufacturer if there was an issue. Few candidates correctly mentioned that it is a legal requirement.

(biv) 'Best before' is definitely a term that many candidates do not understand. Although some candidates did mention low risk foods or deterioration of sensory qualities, few realised that food could be eaten after the date for the second mark. Centres are to be reminded that the term 'going off' is not credited within written answers and candidates must be encouraged to use alternative terms e.g. decay, deteriorate, contamination, not safe to eat etc

'Organic' was well answered with most knowing 'chemical, pesticides and natural' for the answer in relation to fruit, vegetables and animals used in organic farming. Confused candidates incorrectly mentioned local produce, battery hens and food miles.

(bv) This was poorly answered by many candidates. Incorrect responses were related to the heating up of the metal tin, the food ‘going off’ and bacteria being ‘killed’ rather than being dormant under certain conditions. The most successful answers mentioned the danger zone and refrigerator temperatures, warmth and moisture needs of micro-organisms and the need to avoid food poisoning. Many correctly showed awareness that within 2 days the soup would be harmful/ not safe and that bacteria need time to grow.

QUESTION 3

(a) Surprisingly few candidates gained full marks for this section. Many candidates of all levels stated what needed to be improved but then did not give any developments which was the main thrust of the question. Some that did answer correctly then gave more than two development areas or gave repeated vague responses. Flavour, shape and colour were the most commonly chosen areas for development.

(b) Good answers given by many candidates across all abilities. Where centres had prepared candidates well responses were full, extended and gave a wealth of details and explanations resulting in full marks being achieved. However, often candidates confused ‘sensory testing’ with ‘quality control’ or described ‘how to’ sensory test rather than focusing on how ‘fair testing’ was achieved. The better responses included lack of bias, cleansing of palette, random sampling and use of coded samples. Answers were on the whole logical and well structured.

(c) The majority of candidates gained at least half marks for this question but few gave really accurate answers for all ingredients. Flour was generally known for bulk,

SR for giving raising agent. Sugar was generally known for flavour, but many also identified golden colour from caramelisation, a few named Demerara sugar for colour. Fats were identified for colour, flavour and increased shelf life. Some candidates could describe creaming or rubbing in with fats, some could name fats suitable to use and link this to colour and flavour and a few discussed shortening when rubbing in. There were good responses showing understanding of eggs as aerators, coagulation and enrichers of protein but many incorrectly thought eggs were used for flavour. Caramelisation of sugar, emulsification and coagulation of eggs and dextrinisation of flour were often only mentioned by those of higher ability.

QUESTION 4

(ai) A well answered question with most candidates achieving two marks for identifying that bread would not stick to the tin and would therefore keep a better shape. Others gained full marks by correctly identifying that tins would keep a consistent shape or size.

(aii) Unfortunately this was poorly answered with the majority failing to realize the question was about making good quality products. Those that gave good answers correctly referred to consistency of outcome, removal of human error and time and temperature controls. Most incorrect answers related to the advantages of using a breadmaker rather than the production of quality products.

(b) Good answers from the majority of candidates. Popular answers included glazing the loaf with egg/milk/sugar syrup, to give a shiny, glossy finish, sprinkling of seeds/castor sugar on top and making patterns on top.

(c) Most candidates identified that preservatives gave 'improved shelf life'. Others correctly identified that some preservatives maintain the colour and flavour to foods. Some candidates incorrectly thought the addition of food 'colourings' and

'flavourings' preserved products. Well known responses included examples such as 'salt in bread, sugar in jam and vinegar in onions.

(d) Only a handful of candidates had any knowledge of 'modified starch' and could give examples of its use. The majority linked modified starch with pasta, bread and potatoes products or with thickening characteristics.

QUESTION 5

(ai) Excellent responses were seen from all abilities. Responses related to lifestyle, lack of skills, tasty food choices, availability and choice. A very well answered question, with many candidates gaining full marks.

(aii) Most candidates scored well with reference to high fat and salt content, unhygienic kitchens, additives and expense being the disadvantages of 'Take Away' foods. Many

extended answers showed good understanding of social, environmental and health issues related to takeaway products.

(bi) Jacket potato and whole wheat pasta were nearly always correctly answered for full marks.

(bii) Most candidates fully understood the functions of carbohydrates, protein, fibre and fat in the body. Many gave extended answers and identified that energy is released slowly from some sources and that this is invaluable for active consumers.

(c) Correct popular answers included tuna, sweetcorn, chicken and baked beans. Many gave cheese and mayonnaise without stating 'low fat'. Most knew the relevance of high protein and low fat to the respective ingredients that they had chosen. A few incorrectly identified 'salads' or 'fats' as fillings or gave generic ingredient names such as 'meat' or 'vegetables'.

(d) Most successful candidates could correctly identify the reduction of fat to reduce the calorie content by boiling the rice instead of frying it or to choose low fat ingredients. Others correctly suggested increasing the proportion of vegetables in the dish, so reducing the percentage of rice. Some incorrectly suggested just 'putting less rice in' without giving alternatives. A large number of candidates failed to achieve marks on this question.

QUESTION 6

The full ranges of marks were seen for this extended answers question with religion being covered in greater detail than culture. Good awareness of religious needs included: Muslims don't eat pork, Jews don't eat pork or shellfish, vegetarian demands linked to non-meat eating were well understood as were suggestions for alternative protein foods such as quorn and tofu. Those candidates of lower ability tended to just list items rather than 'discuss' so marks awarded were limited. More able candidates correctly outlined their knowledge of food preparation related to Halal and Kosher foods. Better answers also referred to Islam and Hindus but these sometimes became confused. Most correct answers referred to the need for manufacturers to produce appropriate foods for their target consumers, to provide choice for consumers and to ensure any foods produced were suitably and legally labelled to show content.

Cultural references were often omitted or were limited to European cultures for example: Italians and pasta, French and garlic. Other cultures were linked to candidates knowledge of flavours of take away foods such as Indians and curry or Chinese and sweet and sour sauces

Lower ability candidates often lost their focus after writing about vegetarianism and incorrectly gave information on special dietary needs and food intolerances in their answer or referred to ethical issues thinking they were cultural issues.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available at www.aqa.org.uk/over/stat.html

The UMS conversion calculator can be found at www.aqa.org.uk/umsconversion