General Certificate of Education (A-level)
January 2011

Design and Technology: Food Technology   FOOD1

(Specification 2540)

Unit 1: Materials, Components and Application

Report on the Examination

General

The majority of responses could be read quite easily although a small number of candidates had writing which was difficult to read: candidates should think about this issue, as illegible work is clearly a drawback in an examination. Some candidates failed to use the whole space allocated for responses and went over onto unnecessary additional pages.
Most of the candidates appeared to have quite a good understanding of nutrition. Section B was more variable in the way candidates responded but most candidates completed all elements of the appropriate questions in this section, although it must be noted that some candidates still do not read the question properly and therefore do not respond to what is asked. Section C was well differentiated in responses especially 11 (c).

Section A
Most of the responses in this section either proved the candidate knew the subject information or that they did not!

Question 1
Most candidates were able to give at least one function of carbohydrates, with the most common response being energy. Few were able to state that carbohydrates act as a protein sparer. Only a handful of candidates failed to respond. Well answered on the whole.

Question 2
Well answered. Most candidates were able to state two sources of retinol.

Question 3
Most candidates gained at least 1 mark stating either high blood pressure or an increased risk of strokes in their answers. Heart disease/attacks were often mentioned.

Question 4
Most candidates gained 2 marks. A few thought the term referred to vitamins and minerals and some candidates gave examples of foods.

Question 5
Most candidates obtained 2 marks. The most frequent answers were poor absorption of iron, scurvy and poor skin. A minority of candidates thought the question was about Vitamin D and rickets.

Question 6
A number of candidates wrote about water in great detail – how much is needed; where it is found in the diet, in addition to functions in the body. Many candidates mentioned hydration in their responses and a small number referred to bodily fluids.

Question 7
 Candidates either knew this in detail or not at all. The majority were able to state at least 2 factors and often 4, although their reasoning was quite clear especially when discussing age and activity levels. These were the often stated factors. Pregnancy and the activity of the thyroid gland were recognised with some candidates giving well reasoned explanations.

Question 8
Most candidates managed to give some sort of explanation of how an emulsifier works. Mayonnaise/salad dressing was the most common example, but a pleasing number of responses also mentioned ice cream, low fat spreads and cakes. The role of lecithin and its source was frequently misunderstood. However most gained at least a mark for this question.

Section B

Question 9 (a)
This was a very popular question and most candidates coped with it satisfactorily. Women at work, long working hours, grazing, dashboard dining, single households were the most frequently mentioned. Discussion was variable but points were generally well explained.

Question 9 (b)
A number of candidates struggled with this question. A few managed to describe the different techniques that could be used to assess the viability of a food product but the majority got bogged down with the use of surveys/questionnaires. Sensory analysis was highlighted as was the use of digital imaging. Occasionally nutrition profiling was mentioned.

Question 10 (a)
A number of responses were very muddled and verbose with a substantial number of candidates using additional writing space for their answers. It was clear that many candidates failed to understand the context of the question. It was surprising that climatic changes and the environment in general were not often mentioned and when they were there seemed to be a lack of understanding. Sweeping statements were often seen: e.g. Africa has no water and therefore cannot grow crops. Some responses described people going on holiday to other countries and developing their likes and dislikes, others took it as a question on packaging. Many candidates ignored that the question referred to food product development and referred to consumer likes and dislikes. Responses which gained higher marks included air miles, climate change, local foods and Fair Trade.

Question 10 (b)
This seemed to be a popular question and some well structured and detailed responses were seen. A number of candidates understood the nutritional needs of the elderly, giving well reasoned justification and linking this to ready meals. However, some candidates failed to read the question and failed to focus upon the nutritional needs of the elderly and gave generalised functions of some nutrients with little or no reference to the elderly. A surprising number showed a lack of knowledge regarding nutrients and their functions whilst many wasted time defining ready meals and listing their advantages. A common misconception was that energy needs for the elderly are high.

Section C

Question 11 (a)
The choice of a pizza was a popular option and clearly candidates had many ideas of how to develop it further. However, a small number of candidates tried to change the pizza into a baguette, pasta dish or a quiche and consequently failed to achieve any marks.
There are still a few candidates who do not write on the first sheet resulting in cramped drawings and writing on the second page. Most diagrams were annotated. 'Iron and Vitamin C' was fairly well covered by the majority of candidates, most identifying spinach, peppers and tomatoes for the Vitamin C content. However, pineapple was often quoted for Vitamin C as was fish and cheese was considered a good source of iron. Orange /lemon juice was frequently added as was 'liver'. Reducing the amount of saturated fat was the least successful section. The majority of candidates suggested only using a named cheese or using a reduced fat cheese. Increasing NSP was attempted with a majority of candidates suggesting wholemeal flour and named vegetables. Again a number of candidates thought that cheese and tuna contained NSP. The majority of candidates achieved good marks.

Question 11 (b)
The majority of candidates scored satisfactory marks for this question. They were able to define high, medium and low risk food categories quite adequately and gave supporting information – food sources, safe storage and reheating methods. However the conditions for bacterial growth were not always familiar to the candidates and some assumed that cooked rice was low risk, fruit and vegetables too. A surprisingly large amount of candidates thought high risk foods contained high sugar or high salt – missing the point completely.

Question 11 (c)
This question produced varying responses. Candidates who dealt with CAD and CAM separately were more successful than those who put the two together. A small number of candidates thought they were both the same thing. Some candidates got confused with both and some candidates thought it was a question about packaging and discussed the merits of packaging, whilst others listed advantages rather than stating what CAD and CAM actually did. On the whole, the answers tended to be repetitive and candidates tended to write about one in greater detail than the other. Some understood CAD better than CAM and vice versa so there were not any noticeable weaknesses for one or the other. It was clear where candidates were able to relate to the practice of CAD/CAM in coursework.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results statistics page of the AQA Website.