

FOOD AND NUTRITION

Paper 0648/01

Paper 1

General comments

The overall standard of performance in this examination was good. There were many outstanding scripts. Many Candidates were able to gain high marks, indicating sound knowledge and understanding of the subject and an ability to apply that knowledge to situations presented in the examination. Explanations and examples were often given to illustrate points made. Weaker Candidates were often unable to support their statements with additional information.

Candidates seemed to have had sufficient time to answer the required number of questions and there were no rubric errors. Most Candidates attempted to answer all parts of each question. Although handwriting was generally good and easy to read, there were one or two examples of handwriting which was very difficult to decipher, usually because it was either too small or was written in very pale ink. Teachers are advised to emphasise to their Candidates the importance of writing clearly. Mark allocations and the amount of space provided for answers seemed to have been used sensibly by the majority of Candidates. There was no need for additional answer paper and the amount of detail in answers was generally satisfactory.

Comments on specific questions

Section A

1 It was well known that a balanced diet contains all nutrients but it was less well known that the nutrients have to be in sufficient quantity to satisfy individual needs. The majority of Candidates were able to gain at least one of the two available marks.

2 (a) and (c)

Many Candidates were not able to state more than one or two facts about simple sugars and double sugars. It was usually stated that they may be referred to as monosaccharides and disaccharides but the fact that both are soluble in water was rarely mentioned. It could have been noted that simple sugars are the base units for all other carbohydrates, that they are the end product of digestion and can be absorbed into the body. The formulae for both types of sugar would have been credited. A few Candidates correctly stated that double sugars are made up of two simple sugar molecules and that glucose is always at least one of the molecules.

(b) and (d)

It was expected that glucose, galactose or fructose would have been named as examples of simple sugars and sucrose, lactose and maltose as double sugars.

(e) A number of Candidates scored full marks for their description of the digestion of starch. Credit was given for correctly placing enzymes and for naming the substance upon which each of them acted and the end product of the reaction in each part of the digestive tract. No credit was given if enzymes and reactions were not placed correctly.

3 (a) It was well known that calcium is necessary for the formation and maintenance of bones and teeth but it was rarely stated that calcium is also required for blood clotting and for the correct functioning of nerves and muscles.

(b) Milk cheese and yoghurt were the most common examples of sources of calcium although green vegetables and the bones of canned fish were sometimes noted.

- (c) The names of deficiency diseases associated with calcium were well known.
 - (d) Most Candidates correctly identified vitamin D as the vitamin, which assists in the absorption of calcium.
 - (e) Food sources of vitamin D were not well known but most Candidates identified sunlight as the non-food source.
- 4 (a) The reasons for reducing the amount of fat, sugar and salt in the diet were well documented. Suggestions for how reductions in each of them could be achieved were less precise. Many Candidates simply suggested that the amounts of fat, sugar and salt in food should be limited but this was not satisfactory. There are many possible ways in which changes in food choice and methods of preparation and cooking can result in the consumption of lower levels of fat, sugar and salt. Credit was given to every valid suggestion made.
- 5 Most Candidates were able to explain the importance of water in the body although some answers lacked detail. If, for example, it was stated that water is essential for body fluids, an example of a fluid could have been given. Many Candidates mentioned that water helps to regulate body temperature but few were able to develop the point by stating that perspiration has a cooling effect.
- 6 There were many excellent accounts on healthy eating for teenagers. Candidates were able to identify nutrients, which are important and gave reasons to support their statements. There were many possible points, not all of them nutritional. Credit was given to those who mentioned the need for breakfast and for regular meals and the advice to snack on fruit rather than sweet and fatty foods was frequently given.

Section B

- 7 (a) The reasons for serving sauces were not well understood. It was hoped that Candidates would state that sauces provide colour, flavour and texture to dishes. They can help to counteract richness and can also add interest. Credit was only given for naming sauces when they illustrated a given reason.
- (b) The method of making a roux sauce was described well by many Candidates, some scoring full marks.
 - (c) It was well known that lumps can be the result of adding too much liquid at once, adding liquid while the sauce is being heated and by not stirring the sauce well at all stages.
 - (d) The most popular ingredients to vary flavour were cheese, mushroom and onion but all appropriate examples were credited.
 - (e) There were many accurate descriptions of the changes, which take place when a sauce is being made. Many Candidates correctly identified the process as gelatinisation and were able to describe with accuracy all of the effects of moist heat on starch.
- 8 (a) Candidates were able to state one or two reasons for preserving food but few were able to give four. Preserved food is easier to transport; it gives variety to meals and can save time because some or all of the preparation and cooking has been done. It was often noted that preserving food prevents waste, it has a longer shelf life than fresh food and can produce foods in a different form such as jams and pickles.
- (b) The causes of food spoilage were generally known to be yeast, moulds, bacteria, enzyme action and loss of moisture.
 - (c) Many Candidates correctly stated that the conditions necessary for food spoilage include warmth, moisture, food and time.

- (d) Few Candidates were able to identify any of the principles of freezing and jam making. It was hoped that Candidates would be able to state that bacteria are dormant at low temperatures and that because the water inside cells is frozen it is not available for bacterial growth. In jam, the high concentration of sugar makes it impossible for bacteria to survive because water is drawn from them by osmosis. When fruit is boiled bacteria are killed and when jars are sealed the entry of micro-organisms is prevented. Some of the reasons for the use of preserved food repeated the reasons for preserving food given previously. Better answers noted that some households have more disposable income and less time to cook so frozen and canned food may be used more often. Some Candidates noted that because preserved food has a longer shelf-life there is less need to shop frequently and that less time is needed for cooking. Perhaps for this part of the questions Candidates should have taken greater note of the mark allocation and the space available for the answer since many responses were too brief.
- 9 (a) Most Candidates were unable to give six reasons for the importance of cereals. It was usually stated that they provide energy because of their high starch content. Some answers correctly included the information that cereals are cheap, easy to grow and easy to store. It was frequently stated that cereals are a good source of NSP although this is only true of unrefined cereals; few Candidates qualified their answers in this way.
- (b) Full marks were generally scored for examples of cereals.
- (c) Most Candidates could give appropriate general advice on the storage of cereals, stating that they should be stored in cool, dry place. It was sometimes noted that containers must be airtight but most answers gave no reasons for any of the advice given therefore scores were limited. The question asked Candidates to explain how cereals should be stored so reasons for the points given should have been part of the answer.
- (d) It was hoped that Candidates would advise the use of strong flour because of its high gluten content. This would allow the dough to stretch and hold the gases produced. Credit was given to those Candidates who noted that self-raising flour must not be used because yeast is the raising agent for bread. It was sometimes correctly noted that whole-wheat flour can be used because it is a good source of NSP.
- (e) There were many excellent accounts of the changes taking place when a loaf of bread is baked. This demonstrated clear understanding of the scientific processes involved. It was expected that the production of carbon dioxide and alcohol would be mentioned, the expansion of gases, the stretching of the gluten and the evaporation of water. Many Candidates gave good accounts of the coagulation of gluten, the formation of the crust and the dextrinisation of starch.
- 10 (a) There were many very good answers to this question on the nutritive value, storage and uses of eggs. Candidates usually named some of the nutrients in eggs but did not always state any of functions of the nutrients. The storage of eggs was usually mentioned although in limited detail. Some answers were limited to storing eggs in a cool place away from strong odours.

The different uses of eggs were well documented and examples to illustrate the uses mentioned were generally given. Better Candidates were able to explain why eggs were used in various ways, mentioning the coagulation of protein and the temperature at which it occurs. A few answers gave information on the untangling of globular protein to allow air to be trapped. All relevant information was credited. Many Candidates gave lengthy accounts of how the freshness of egg can be tested but this information did not form part of the expected answer.

- 10 (b)** This question was not popular. There were few very good answers mainly because Candidates did not appear to understand the nature of food poisoning. Most answers were limited to a list of the safe storage of foods including foods, which are not high risk. It was expected that the signs and symptoms of food poisoning would have been set out. Most Candidates mentioned bacteria but gave little factual information on the conditions required for their multiplication. Named examples of food poisoning, bacteria or the symptoms of food poisoning were omitted. Many of the storage points given, including keeping foods clean, cool and covered were correctly made and the danger of cross-contamination was often referred to but factual information was generally lacking. Personal and kitchen hygiene points were sometimes given but there was a lack of detail on the effect of insufficient thawing and cooking of meat, especially poultry. Only one or two Candidates mentioned Salmonella or the temperature required for the destruction of bacteria. Candidates should be reminded that questions of this nature should only be attempted by those who have a strong understanding of the topic and are able to support their information with detail. General information rarely scores more than one or two marks.

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Practical

General comments

Most of the work presented by candidates was of a good standard. Centres generally labelled their work clearly and arranged it in the correct order. Some Centres provided photographs of the results which were helpful in confirming the marks allowed. It is important that Centres follow the instructions correctly for allocation of the tests. According to the instructions the five chosen tests should be "allocated to the candidates in strict alphabetical order". Some Centres were not following this regulation. It is also vital that all work shows evidence of marking and that mark schemes for each section of the work are followed carefully. The planning sheets should be marked as soon as they are completed, before the actual cooking takes place. Some of the comments made referred to what actually happened in the practical examination. These comments should be in the methods and results sections of the mark sheets, not in the marking of planning. The allocation of marks for the results section was not always followed correctly. Some Centres were awarding marks according to their own schemes and this should not be the case. There should be detailed annotation in all sections of the work. Some Centres provided excellent, detailed comments so that it was clear what work had been completed and why certain marks were allocated. A few Centres still continued to give very short general comments about the work in all sections, often repeated for each candidate. This is not helpful in verifying the marks given. Some adjustments were made to marks which were too high, when supporting annotation was brief or when dishes chosen were insufficient or unsuitable or when it was not clear what actually happened during the cooking.

The choice section of the preparation sheet should show clearly the dishes which the candidate has chosen to answer the question. It is helpful if these dishes are labelled (a) and (b) if there are two parts to the question. Recipes should be given next to each named dish. Some candidates made excellent choices, answering the question and showing the use of a good variety of methods and ingredients. A few candidates chose dishes which were very low skill e.g. salads and these were often awarded too many marks. Some candidates repeated methods e.g. rubbing in or repeated a food e.g. cheese. Candidates should not be using pre-prepared or pre-cooked ingredients e.g. chopped vegetables, as this should be part of the test. Sometimes meals were unbalanced and incomplete, needing the addition of vegetables and sauces. On some occasions it was not clear which dishes were to form part of the meal required by the question. It is vital that candidates read the question very carefully to ensure that they are preparing exactly what is required and sufficient skilled work is planned to fill the time. Examiners should study the candidates' choice carefully with reference to the question set. Marks should be awarded fairly, with annotation, so it should not be the case that full marks are awarded to every candidate in the Centre regardless of the work.

The time plan should show a logical sequence of work from the beginning of the test to the final serving. Many candidates planned their work well showing some detail about the work to be completed. However, quite a few candidates still failed to give any indication of methods, times, temperatures, etc. and in some cases it was not clear which dishes were being made. Some candidates showed pre-heating of ovens, which they should do, but it is not economical to pre-heat for longer than five or ten minutes. Occasionally an empty oven was on using fuel for much longer than necessary. Some dishes were planned to be made very late in the test and would not actually be thoroughly cooked, cooled or set by the finishing time. When a dish requires several stages, time should be allowed for some ingredients to cook or cakes to cool before planning to go ahead with the next stage. Candidates should interlink or dovetail their dishes so that they are not simply waiting for one dish to cook after another, as was sometimes the case. It is important that adequate time is allowed for serving the dishes in the correct order of courses if it is a meal. Many candidates were serving their dishes as they were made, so a complete hot meal was not served. A few candidates did this section well indicating how they would garnish or decorate their dishes and also giving the correct order of serving. Shopping lists were generally good.

When marking the actual method of cooking examiners should include clear annotation to explain what was completed. The comments “used all cooking methods” and “has improved from the beginning of the cooking” do not explain what happened during the cooking. The mark scheme should be used to help examiners comment individually on each candidate’s knowledge of recipes, use of tools, hygiene, etc.

The results section should show clear allocation of marks, according to the mark scheme, for each dish made. Comments should be made on the flavour, texture and edibility of each dish. Maximum marks cannot be awarded for simple dishes involving little skill. Dishes which are inedible or are not completed should not receive any marks in this section. Some Centres were reporting that “the dish could not be eaten” but were still awarding some marks for the result. Marks on serving and appearance should also be supported by detailed annotation.

Comments on specific questions

Question 1

This was not a very popular choice of question. Candidates who answered it did so well, choosing three suitable and skilful dishes to show the use of the different pieces of equipment. Meals were completed, although it was not always clear which of the three dishes was to be used as part of the meal.

Question 2

More Centres included this question in their choice of questions. Some candidates planned skilful, varied and filling meals for the vegetarian while others chose a few simple dishes. On some occasions candidates chose dishes which would not pack well or would not keep when stored for some time e.g. ice cream. Dishes containing fruit for the evening meal were usually well chosen sweet dishes, although savoury dishes which contain fruit could have been chosen e.g. sweet and sour chicken.

Question 3

This was the most popular question. Usually five suitable dishes were made using the ingredients listed. The dishes were varied and usually skilful. A few candidates attempted to make a meal including one of their dishes. This was not required by the question on this occasion.

Question 4

Many Centres chose this question but it was not answered well. Candidates made the meal but did not include the batter dish required by the question. Scones were completed well but the cakes were sometimes made by a different method, not the melting method as stated in the question.

Question 5

Few candidates answered this question and it was not well answered on the whole. Often only two types of flour were used although three dishes were made. Sometimes candidates tried to use all three dishes in the meal. Meals for teenagers were completed and were usually suitable.

Question 6

This was another popular question. Meals were prepared well and varied desserts were chosen. Candidates were easily able to prepare and serve the small cakes and biscuits required by the test.

Question 7

On many occasions candidates who answered this question did not score such high marks as the dishes they chose were of low skill e.g. steamed fish. Candidates need to take care that their finished dishes show a variety of skills. The steamed fish could have been improved by including it in a fish pie with potatoes and a skilful sauce. Main meals were completed but many candidates did not include extra different skills which would have improved their marks.

Question 8

In this popular question many candidates chose well by including a wide variety of fruit and vegetables in their meals. Some candidates chose to include rice dishes when *brown* rice would have improved the NSP content of their meals or flour dishes when *wholemeal* flour would have been a better choice. Some good shortcrust pastry dishes were completed. However, a few candidates chose two almost identical dishes, e.g. two flans which would not show a variety of skill in the use and handling of the shortcrust pastry.