

# FOOD AND NUTRITION

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Paper 6065/01

Theory

## General comments

The range of scores for this paper was very wide. It was encouraging to note that many candidates produced work of a very high standard, demonstrating a sound knowledge of the topics tested and the ability to apply that knowledge to a range of different situations. Full marks were often awarded to reflect the calibre of the work presented. The weakest candidates, however, were able to recall facts but were unable to give explanation or examples in support.

Candidates seemed to have had sufficient time to answer the required number of questions. There were few rubric errors.

Scripts were usually well presented although there are several points which need to be addressed. Candidates must be reminded to complete the grid on the front cover to identify the questions they have answered. Additional sheets and answer booklets must be securely fastened to the question paper; some Centres appeared to have instructed candidates to place additional answer sheets loosely inside the question paper; this is not secure and must be avoided. The instructions on the front cover of the question paper give information on the presentation of scripts that must be followed. Candidates should be reminded to rule a line between questions and to leave a space between each part of a question. In too many instances there was no distinction between one question and the next.

Mark allocations at the end of each part of a question are for guidance. They should help candidates to decide on the amount of detail to include in their answers and to estimate the amount of time to spend on each part of the question. Some candidates wrote at length on a part question to which only a few marks were allocated. This is clearly unnecessary. Relevant information should be selected rather than giving all known information on a topic.

## Comments on Individual Question

### Question 1

- (a)(i) Most candidates were able to state that fat is composed of the elements carbons hydrogen and oxygen.
- (ii) The functions of fat were well known with most candidates giving energy as their answer. Insulation, the protection of internal organs, the formation of cell membranes and a solvent for fat-soluble vitamins were some of the other functions mentioned. The majority of candidates scored full marks.
- (iii) There were few correct definitions of saturated fat. It was expected that candidates would state that saturated fat contains the maximum amount of hydrogen, the molecule is composed of single bonds or that it is solid at room temperature. Full marks were awarded for stating two correct facts.
- (iv) Examples included butter, lard, cream and coconut oil.
- (v) Most candidates could not define polyunsaturated fat. Credit was given for noting that polyunsaturated fat does not contain the maximum amount of hydrogen and that the molecule has more than one double bond. Many candidates correctly stated that polyunsaturated fat is liquid at room temperature.

- (vi) Named examples were expected; for instance sunflower oil, corn oil and soya oil. No credit was given for giving margarine as an example since it is often made from whale oil. Sunflower margarine, however, would have been an acceptable answer.
  - (vii) The digestion and absorption of fat was well known by many candidates and full marks were often awarded. It was disappointing to note that some candidates were unable to give any correct facts on digestion and absorption.
  - (viii) Most candidates were able to explain that excess fat is stored under the skin or around internal organs causing obesity. Better answers included information on coronary heart disease, often describing how cholesterol can be deposited in blood vessels causing them to be narrowed and sometimes blocked.
- (b)
- (i) The functions of NSP were well known. Most answers included the information that NSP absorbs water, making faeces soft and bulky and easier to expel. Better answers noted that NSP stimulates peristalsis and can absorb toxins and lower the level of cholesterol in the body.
  - (ii) Candidates usually stated that constipation could result from a lack of NSP in the diet. Some answers correctly identified diverticular disease, cancer of the colon, haemorrhoids and hernias as possible consequences.
  - (iii) Credit was given for named fruit and vegetables, fruit seeds and skins, pulses, wholemeal bread and whole grain cereals.
- (c)
- (i) There were many informative accounts of the uses of water in the body. Full marks were awarded to those candidates who gave explanations. It was usually stated that water forms the basis of body fluids but examples were not always given. Similarly, water was known to regulate body temperature and to help to eliminate waste but further information was rarely given.
  - (ii) Most candidates were unable to define water balance. It was hoped that candidates would state that the amount of water taken into the body should be the same as the amount lost.
- (d)
- There were many excellent accounts of the choice and cooking of food for the elderly. General points, which would apply to all groups in society, were not credited since the focus of the question was on the elderly. It was often noted that the amount of salt, sugar and fat should be lowered to reduce the risk of hypertension, diabetes, obesity and coronary heart disease. It was expected that the need for protein, calcium, iron and vitamins C and D would be mentioned as well as the requirement to offer smaller portions of foods which are easy to eat and digest. It should not be assumed, however, that elderly people have no teeth!

## Question 2

- (a) The nutrients in milk were not well known. Most candidates stated that milk contains protein but other nutrients were not always identified. It was hoped that fat, carbohydrate or sugar, vitamins A and D, riboflavin and calcium would be named.
  - (b) Rules for storing milk were usually given correctly. As expected, candidates noted that milk should be stored in a clean, cool place; it should be covered and should be kept away from foods with strong odours.
  - (c) Cheese, butter, cream and yoghurt were the examples of milk products usually given.
  - (d) Most candidates were not able to explain why milk becomes sour. Full marks could have been scored for stating that lactic acid bacteria act on lactose converting it into lactic acid. This curdles milk, separating it into curds and whey.
- (e)
- (i) There were few correct descriptions of pasteurisation. It was expected that the temperature and time for one of the methods of pasteurisation would be given and that candidates would state that the process destroys pathogenic bacteria and reduces spoilage bacteria. Few facts were known.
  - (ii) Ultra Heat Treatment also lacked precise detail. Again, the temperature and time for the process should have been stated and the fact that all bacteria are destroyed. Some candidates noted that

the milk was sealed in foil-lined containers but very few mentioned that this would prevent the entry of more bacteria.

### Question 3

- (a) The responses to this part of the question were disappointing. It was expected that candidates would state that food is cooked to make it safe to eat, to change the colour, texture and flavour of food and to create new products. Only a few candidates noted that cooking food provides hot dishes in cold weather and that cooking vegetables reduces their bulk and allows more to be eaten. Many of the answers were repetitive, naming different methods of cooking instead of giving reasons for cooking. Examples often lacked detail, for instance, if a candidate noted that cooking food allows a food to be cooked in a variety of ways, it would be expected that the example could be eggs poached, fried, boiled and so on. To simply give eggs as an example without further detail would not have been credited.
- (b)(i) Credit was given for any advantages and disadvantages of steaming. It was suggested that steaming requires little attention and that there is little loss of nutrients. Steamed food has a soft texture and is easily digested. It is, however, a slow method of cooking during which flavours and colours are not developed; steamed food has a soft texture. The kitchen may become hot when food is being steamed and there is often a great deal of condensation on windows.
- (ii) As in the discussion on steaming, all correct information was credited. Frying was known to be a quick method of cooking during which food becomes crisp and brown and an appetising flavour is developed. It does, however, require constant attention because frying can be a dangerous process. Fried food can be difficult to digest because fat is absorbed during cooking. The additional fat can contribute to obesity and coronary heart disease.
- (iii) Many candidates seemed unfamiliar with the use of a microwave oven; there were many references to the danger of radiation posed by microwaves but there is no danger since microwaves are only emitted when the door is secure. Microwave cooking is quick, the kitchen does not get hot and no preheating of the oven is required. Further time is saved because food can be cooked and served in the same dish, saving washing up. The main disadvantages are that food does not become brown or crisp, flavours are not developed and it is not possible to judge accurately when food is cooked. Hot spots may develop in food if it is not turned during cooking. Metal containers must not be used to avoid damage to the microwave oven.

### Question 4

- (a) There were many excellent accounts of the method of making and baking a Victoria sandwich Cake. Candidates gave adequate detail, including the oven temperature, the cooking time and a method for testing to check whether the cake was thoroughly cooked. There were a few candidates who seemed to have no experience of making a cake by the creaming method.
- (b) Most candidates could identify two ways of varying the cake. Suggestions included cocoa, coffee essence, lemon and orange rind, dried fruit, vanilla essence and chopped nuts.
- (c)(i) Many candidates found it difficult to give advice on the choice of flour for making the cake. White flour gives a lighter texture and is easier to rise. Soft flour should be used because of its low gluten content. If self-raising flour is chosen, the baking powder must be omitted because a fixed amount is already included in the self-raising flour. Wholemeal flour would, however, add colour, flavour, texture and NSP.
- (ii) Caster sugar was known to be a good choice for the creaming method because of its fine crystals that dissolve easily when creamed with fat. Soft brown sugar does, however, add colour and flavour.
- (iii) Better answers were given regarding the choice of fat. Soft margarine creams well and gives a good colour. Butter has a better colour and flavour but is more expensive and more difficult to cream.

- (d) Most candidates were able to note one or two changes which take place during the baking of the cake but the majority of answers lacked detail. It was expected that candidates would note that the fat and sugar melt, air expands, carbon dioxide is produced by the baking powder and the cake is pushed upwards. Starch from the flour absorbs the melted fat. Sugar caramelises, starch dextrinises and a crust forms on the surface. The risen shape sets when protein coagulates. Full marks could be gained without giving a perfect account of the changes. This section illustrates well that candidates must understand what they are learning otherwise they will find it difficult to answer questions of this nature.

#### Question 5

- (a) Those candidates who chose to answer this question generally scored well. It was well known that convenience foods save time, effort and fuel because some or all of the preparation has been done. They require little skill, a small amount of equipment, and allow families to enjoy dishes which may have been too complicated to prepare otherwise. The disadvantages of convenience foods were equally well discussed. Most candidates noted that they tend to be expensive and portion sizes are small. They may be high in fat, sugar, salt and additives and contain little or no NSP. Some vitamins are lost during processing. Credit was given to all valid points made.
- (b) Candidates were usually able to name one or more of the different types of convenience food. It was hoped that frozen, dried, canned and ready to eat foods would have been mentioned.
- (c) Although there are many pieces of information found on packaging, candidates seemed to find it difficult to note more than one or two and seldom offered reasons for the information. The name of the product, the weight, the cooking and storage instructions and nutritional information were usually stated. Some candidates mentioned 'sell by' and 'use by' dates. Credit was given to all relevant information. Many candidates discussed nutritional information in detail but ignored any other information.
- (d) There were many good accounts on the reasons for packaging. It was usually noted that packaging prevents damage to the food during transport and storage and prevents the entry of micro-organisms. Some candidates correctly stated that packaging identifies products and allows manufacturers to give information on ingredients, cooking and storing among other things. Other reasons for packaging were credited.

#### Question 6

- (a) There were many detailed descriptions of creaming. It was usually stated that fat and sugar are creamed, with either a wooden spoon or an electric mixer, until light and fluffy. During the process air is trapped; this acts as a raising agent in, for example, Victoria sandwich cake and queen cakes.
- (b) Rubbing in was known to be used in the preparation of, for example, shortcrust pastry and scones. Air is trapped when fat and flour are rubbed together with thumbs and fingertips. The fingertips are the coolest part of the hand and prevent the melting of fat.
- (c) Kneading is used in bread making to develop gluten and to distribute yeast. The knuckles are often used but a dough hook on an electric mixer is quicker. After a yeast dough has been allowed to ferment it can be kneaded to break down large pockets of carbon dioxide and to introduce air which stimulates the action of yeast. Some candidates noted, correctly, that when making flaky or puff pastry dough is kneaded to develop gluten before rolling and folding.
- (d) Proving was known to be another stage in bread making. Dough is left for some time in a warm place to allow carbon dioxide to be produced before baking. It replaces any carbon dioxide lost during kneading and ensures a light finished result. Many candidates identified fermentation as being the process during which yeast is broken down into carbon dioxide and alcohol when conditions are favourable. Candidates usually named an appropriate example such as bread rolls, Chelsea buns or a loaf of bread.
- (e) Marinading was the least familiar term to most candidates. It was hoped that it would be noted that it involves the soaking of food, usually meat, in a liquid for several hours before cooking in order to add flavour and to tenderise. The liquid used can be lemon juice, wine or vinegar; the acid contained in the liquid breaks down collagen and shortens cooking time.

### Question 7

- (a) Most candidates were able to give a few uses of fats and oils but there were few who gave more than three. Frying and pastry making were usually mentioned but most answers lacked detail. It was expected that creaming and sauce-making would have been mentioned. Only a few candidates noted that butter icing can be used to decorate cakes and that oil is frequently used to prevent products from sticking to baking tins. Information was usually correct but answers tended to be too brief.
- (b) More information was given on the use of air as a raising agent. It was well-known that air expands on heating, giving a light texture to baked products. Most candidates gave examples such as sieving, creaming, rubbing in and whisking and supported their answers with appropriate examples.
- Few candidates mentioned rolling and folding pastry as a method of incorporating air. However, full marks were often awarded, indicating sound knowledge of the topic.
- (c) Most discussions on garnishing and decorating were too brief. Few candidates stated that savoury foods are garnished and sweet foods are decorated but the majority were aware that food is made more attractive and interesting. Good examples of garnishes and decorations were given but there was rarely any indication of the foods on which they could be used.

# FOOD AND NUTRITION

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Paper 6065/02

Practical

## General comments

The work presented by candidates was generally of a good standard. Most Centres ensured that the work was labelled correctly and was arranged in the correct order. Some Centres included photos to illustrate the dishes produced by their candidates. Although this is not compulsory it is helpful in confirming the marks awarded in the results section. It is important that Centres allocate the tests correctly according to the instructions and that all candidates complete all sections of the practical examination. Mark schemes for each section of the work should be followed carefully and Examiners should mark all parts of the work as it is completed. The planning sheets should be marked before the actual cooking takes place. Some work has shown comments, which indicate that the planning sheets were marked after the practical session. In each section there should be evidence of the work produced by the candidate. This is shown in the planning sheets which are submitted to the examination board and also in the annotation by the Examiner in all sections. It is vital that there is detailed annotation by the Examiner to show how the marks were allocated. It is particularly important in the methods and results sections where the marks which have been awarded should be supported by explanation of what actually happened during the cooking session. Some adjustments were necessary when marks awarded were too high without supporting annotation and when instructions and mark allocations were not followed carefully.

In the choice section of the preparation for the practical examination candidates should provide a clear list of named dishes which they have chosen to answer the question. These should be arranged according to the requirements of the test and may be labelled parts **(a)** and **(b)**. Sufficient dishes should be chosen to fill the allocated time and to answer the question fully. A good variety of ingredients should be used and a wide variety of skills and methods shown. When meals are planned these should be attractive, balanced and suitable for the people who are to eat the meal. Accompaniments and desserts should be included to complete the meal. Marks should be deducted when meals are incomplete or when the work is very simple or repetitive. In this section some Examiners were awarding marks which were too high. Next to each chosen dish there should be a clear list of ingredients, showing the types of foods and the exact amounts required. Candidates need to take care that recipes are complete and that important foods are not missing. Clear descriptions are required, so "mixed fruit" would not explain exactly what is needed. It was pleasing to see that very few candidates used convenience foods in their recipes.

The time plan should show how candidates work through their test in a logical sequence. Dishes which take the longest time or need to be chilled should be started near the beginning of the test. Brief details of methods should be given including cooking times and temperatures. Candidates are still failing to include these details. Pre-heating of ovens, preparation of equipment and washing up throughout the test should be shown clearly. Completed dishes should be served towards the end of the test time. Care should be taken that foods are served in the correct order as for a meal and that hot foods are served hot. Serving time should be shown on the plan with a brief indication of how dishes are completed for serving. This area particularly needs some improvement. Shopping lists were generally good, although some candidates did not list any special equipment which would be required.

When marking the actual method of cooking Examiners should include clear annotation to explain how the candidate worked. General comments such as "good", "satisfactory", "worked hard" do not explain clearly what took place. In this section some Examiners were awarding high marks for very few simple dishes. The mark scheme states clearly that a mark of 44/55 should be awarded for very good methods, excellent timing and a variety of skills. In marking the quality of dishes/results Examiners should make detailed comments about texture, flavour and edibility of each dish. The mark scheme needs to be studied regarding the allocation of marks for each dish. Dishes which have not been completed or are not part of the test cannot be awarded any marks. Comments about how the dishes were served are also required to support the marks awarded in this section.

## **Comments on specific questions**

### **Question 1**

This was a popular question, many candidates producing three very different dishes which included herbs and spices as required. Occasionally candidates produced one or more of their dishes without the required herbs and spices. Meals were completed although some candidates did not indicate which dish from (a) would form part of the meal. Some candidates failed to include accompaniments with their meal. A variety of suitable drinks were made; wine is not a suitable choice here, particularly as it would not show any skill in the preparation.

### **Question 2**

This was also popular choice of question. Candidates chose well in the preparation of a vegetarian meal. Some however failed to provide a choice of desserts or provided two desserts which were very similar so limiting the marks for variety of skills. Cakes made by the whisking method were good, as were the cold drinks.

### **Question 3**

Surprisingly this was a less popular question as it would seem to be relatively straight forward. Candidates chose a wide variety of dishes but need to take care that skills are shown and that flavours are not repeated in their dishes. Suitable cakes were chosen but were not all decorated.

### **Question 4**

Generally candidates chose suitable dishes to illustrate the three cooking methods required by the question. Care however needs to be taken that the dishes are skilful. A piece of fish could be steamed or deep fried successfully, showing use of the cooking methods as required but this does not make an interesting or skilful result. On this occasion a sauce could have been added to complete the dish and show more skills. Meals were provided but did not always relate particularly to the needs of a convalescent i.e. easy to digest, plenty of vitamins and minerals, not too high in fat, easy to eat, etc. Suitable drinks were made.

### **Question 5**

This was the most popular question. Batter mixtures were prepared, sometimes more than the one required, and these were included in the meal as sweet or savoury dishes. Accompaniments were sometimes missing for the meal. Shortcrust pastry dishes were prepared but some candidates also used this pastry to make the small cakes. This limited marks allowed for different skills. It would have been better if the cakes had been prepared by an alternative method e.g. creaming, to gain more marks. Candidates occasionally made scones instead of shortcrust pastry; this is rubbing in method, but not shortcrust pastry.

### **Question 6**

This was a popular question but not all candidates answered well. Suitable meals were chosen for the people stated in the question but many of the dishes did not include good supplies of calcium and Vitamin D. Candidates could have chosen dishes which included cheese, milk, etc.

Biscuits and cakes were completed but the biscuits particularly were not always made by the melting method.

### **Question 7**

This was the least popular question and candidates who chose to answer it usually chose simple, repetitive dishes using fruit. A wide variety of fruit and vegetables containing Vitamin C could have been incorporated in dishes which showed skills in addition to just the preparation of the foods e.g. preparation of a pastry dish with a fruit filling. Packed meals for three boys should have included one dish from (a) and at least two further sweet or savoury skilful dishes. The meals should have been suitably filling for three boys and suitable to pack. Drinks were usually chosen well.

**Question 8**

Evening meals prepared for two weight-watching friends were not always suitably low in calories as they often included a lot of fat, sugar, cream, etc. Care needs to be taken to answer the question set. The choice of desserts should have been varied in preparation and suitable to accompany the meal. This was not always the case. Dishes using different raising agents were made but some candidates used the same raising agent in both dishes.