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## FOREWORD

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This booklet contains reports written by Examiners on the work of candidates in certain papers. **Its contents are primarily for the information of the subject teachers concerned.**

# FOOD AND NUTRITION

## GCE Ordinary Level

Paper 6065/01

Paper 1 - Theory

### General comments

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

Presentation of the scripts was generally good although there are still instances where candidates neither rule a line between answers nor leave a space. It is not necessary to begin every question on a new page but there should be a clear beginning and end to each question. Some candidates did not number questions and part questions clearly. It was, however, pleasing to observe that the majority of candidates clearly listed the **Section B** questions attempted by completing the grid on the front cover. Although the request to do so is clearly printed, some candidates ignored the instruction.

The use of correction fluid, although not widespread, continues to be a problem. Candidates are reminded that a neat line through work, which the Examiner should not mark, will be sufficient.

It would be helpful if answer sheets were fastened to answer booklets more loosely. Occasionally, loose sheets were assembled in the wrong order. This must be checked by candidates before scripts are collected; it is the responsibility of the individual to ensure that sheets are assembled and secured. String was sometimes fastened too tightly causing paper to tear when pages were turned. This must be avoided because there is always a chance of individual sheets becoming detached.

Some of the answers to questions in **Section B** were disappointing, suggesting that sometimes candidates misread questions. Some answers were very lengthy but gained few marks because facts were missing. Candidates should be encouraged to take note of the mark allocation for each part of a question and use this information as guide to both the time to spend on part of a question and the amount of detail to include. Marks are intended to guide candidates' responses.

Many answers demonstrated that facts had been thoroughly learnt but this alone is not enough to gain high marks. It is essential that information is understood so that appropriate facts and explanations can be applied to given situations. The most successful candidates were able to give facts, supported by explanations, and were able to demonstrate their ability to select appropriate responses from their knowledge of the topic.

### Comments on specific questions

#### **Section A**

#### **Question 1**

- (a)(i) It was well known that fats are made up of carbon, hydrogen and oxygen.
- (ii) Many candidates gained full marks for giving five functions of fats. They noted that fat could be used for providing warmth and energy, for insulating the body and for being the solvent for some vitamins. It can add flavour, colour and texture to foods, increasing the calorific value without adding bulk. Any correct information was credited.

(iii) It was disappointing that many candidates were unable to define saturated and unsaturated fats and to give examples of them. It was hoped that saturated fats would be known to be solid at room temperature, to have a full complement of hydrogen atoms and to have only single bonds in their structure. Butter and lard were the most frequently mentioned examples. Many candidates were unable to state that polyunsaturated fats are liquids at room temperature; a small percentage knew that there were at least two double bonds in the structure of the molecule and that more hydrogen could be taken up. Popular examples were corn oil, sunflower oil and maize oil.

(iv) It was clear that many candidates did not read this part of the question carefully. The problems associated with saturated fat in the diet were asked for but often accounts were written on the problems of a diet high in fat.

Good answers noted that saturated fat contains cholesterol which can stick to artery walls, narrowing them and restricting blood flow. Many mentioned a link with coronary heart disease and highlighted problems such as hypertension and the possibility of heart attacks or strokes.

(v) It was surprising to note that the digestion and absorption of fat was not well known. Many answers contained a few correct facts but full marks were rarely scored. It was expected that candidates would be able to name the enzyme which breaks down fat, state in which part of the alimentary canal it was effective, name glycerol and fatty acids as the end products and to note where and how absorption takes place.

(b)(i) The functions of calcium were well known and full marks were frequently gained.

(ii) Sources of calcium were usually given as milk and cheese, although some candidates mentioned canned oily fish such as sardines.

(iii) Vitamin D was known to help in the absorption of calcium.

(iv) Rickets was usually the named deficiency disease although a few named osteomalacia.

(c) It was well known that iron forms haemoglobin, the red pigment in blood, and that a deficiency causes anaemia. Some noted that haemoglobin transports oxygen around the body but few explained that oxygen is then used to oxidise glucose to produce energy. Credit was given for mentioning symptoms of anaemia.

(d) Most candidates were able to give several pieces of good advice on meal planning for convalescents. General meal planning points, for example the need for the meal to be well-balanced and to have a variety of colour, flavour and texture were not expected. Good answers suggested that there should be adequate protein, calcium, vitamin D, iron and vitamin C, and that there should not be too much fat. Light, easily digested meals and adequate fluids were also recommended. Full marks, however, could only be gained when reasons for the advice were given since the question asked for advice with reasons.

## Section B

### Question 2

(a) Many candidates gained high marks in this part of the question. They were able to give clear instructions, with reasons, for making shortcrust pastry. No credit was given for giving a basic recipe or for describing the making of a particular dish since these were not part of the question.

(b) It was disappointing that candidates were not able to give more than one or two rules to follow when rolling shortcrust pastry. It should have been stated that surfaces should be lightly floured, that pastry should not be turned over and that only light pressure should be used for rolling. The pastry must not be stretched when rolling and short, forward strokes with the rolling pin should be used. Again, no marks were allowed for describing processes such as lining a flan ring; this was often included in answers.

(c) Good examples of dishes, both sweet and savoury, were given. It was, however, surprising to note that cakes, scones and biscuits were often suggested as examples of dishes using shortcrust pastry.

- (d) Many candidates were unable to give advice on the choice of flour and fat for shortcrust pastry. It was not well known that plain flour should be chosen because air is the raising agent in it and that soft flour is best because the gluten content is low. Credit was given to those who suggested that wholemeal flour could be used because of its nutritional value; those who said that self-raising flour should not be used because it contains baking powder also gained marks. Hard margarine, butter and lard were the most frequently named fats. Better candidates explained that they contributed to colour, flavour and shortness and that they would not melt during rubbing in.

### Question 3

Although this question was popular, answers were disappointing. They generally gave little relevant information.

- (a)(i) Many candidates seemed to lose sight of the fact that their answers should be related to saving money when planning, preparing and cooking meals. Many lengthy accounts were produced on the virtues of saving money. Many points, with or without reasons, could have been made. The most frequently stated methods of saving money were to buy food in season, buy in markets, avoid buying or cooking too much food to avoid waste, to use left-overs and to reduce the use of processed foods since they are usually more expensive. It was also suggested that a shopping list would be helpful and that special offers in supermarkets should be bought. The use of cheaper cuts of meat, eggs and pulses was recommended, as was the suggestion that fruit and vegetables could be grown at home. All valid information was credited.
- (ii) There were many methods of saving fuel suggested but some candidates did not restrict their answer to the preparation and cooking of meals as stated in the question. The use of pressure cookers, tiered steamers and microwave ovens were known to save fuel. Using the whole oven to cook a variety of dishes was mentioned as was the advice to preheat the oven for not more than ten minutes. A few candidates explained that pans should be good conductors of heat and that having small flames under pans would prevent wastage of gas. Several made the point that food should not be overcooked and that it would be better to cook the meal just before serving to avoid using fuel to reheat dishes.
- (b) Answers covered a wide range of points and many very good accounts on the advantages and disadvantages of using a food mixer were given. It was usually stated that time, effort and energy are saved and that mixtures are usually thoroughly mixed and even in texture. Some noted that they are easy to use and large quantities can be prepared at the same time. The cost of buying the appliance and the cost of electricity to operate it were usually given as disadvantages. Some candidates noted that it can be dangerous if the person does not know exactly how to operate the machine; sometimes overmixing can result from too long a time spent beating a mixture. The motor can overheat and burn out. They can be difficult to clean and cutting blades must be handled carefully to avoid accidents.

### Question 4

- (a)(i) Yeasts, moulds and bacteria were correctly stated as types of micro-organisms by the majority of candidates. All who attempted this question were able to name at least one.
- (ii) Conditions for growth which could have been named were warmth, moisture, food, time, oxygen and a suitable pH. These were not well known.
- (b)(i) It was essential that answers were restricted to the reduction of food contamination when shopping. It was often noted that shops should be free from animals and insects and that they should be clean. Food must be covered, raw foods and cooked foods should not be kept together and different equipment must be used for each. Credit was given to those who described the characteristics of particular food when fresh, for example fish. Many answers included information on the appearance and habits of personnel working in food stores. There were many good answers which could have consisted of facts or a combination of facts and explanations.

- (ii) Many candidates scored full marks for their accounts of food storage. There was some discussion, however, about the use of the refrigerator and the freezer. The terms were used interchangeably. It was frequently stated that bacteria are destroyed by freezing, which is not the case. It was expected that information given would include the advice to keep food in airtight containers, covered, and in a cool place. Points on the storage of food in a freezer and refrigerator, the storage of dry ingredients and the need to use food in rotation were all relevant. The best answers included specific details such as the recommended temperatures for refrigerators and freezers.
- (iii) Candidates tended to gain better marks for this part of the question. Points on personal hygiene were given, kitchen hygiene was discussed and information given on the temperature required during cooking in order to destroy bacteria. In many answers, candidates attempted to give the reasons for their statements as 'to prevent contamination'. This was unacceptable since the phrase was used in the question. It was expected that candidates would link their statements to conditions needed for bacterial growth or to the risk of cross contamination.

### Question 5

- (a) The nutrients present in milk were well known.
- (b) There were many excellent accounts of the storage of milk in the home. Candidates were, however, sometimes unable to give reasons for the advice given. It did not seem to be well known that when milk is stored at a low temperature bacteria will multiply more slowly. Credit was also given for methods and explanations for the storage of dried milk.
- (c) The answers to this part of the question were disappointing indicating a lack of knowledge and understanding.
- (i) It was expected that candidates would be able to state that milk becomes sour when lactic acid bacteria act on lactose changing it to lactic acid. This causes the milk to curdle. Sour milk has a bitter flavour and an unpleasant smell.
- (ii) Most candidates were able to give only one or two points to describe the changes which occur when milk boils over. Full marks would have been given if it had been stated that when milk is heated to above 60° C protein will coagulate forming a skin on the surface. Continued heating converts the water in milk to steam which cannot evaporate so it builds up under the skin, pushing the skin upwards. The milk boils over when the skin reaches the top of the pan.
- (d)(i) Marks could only be gained for precise information. An exact temperature and an exact time for pasteurisation were expected. It was usually stated that the process destroys harmful bacteria and that flavour is not affected.
- (ii) Again, only an exact temperature and an exact time for the process could be credited. It was well known that all bacteria are destroyed but few noted that the milk is sealed in foil-lined containers.

### Question 6

- (a) Candidates tended to misunderstand this part of the question. It was concerned with safety when deep frying, not the method of deep frying or the steps to take when the fat catches fire. The best answers advised that the pan should not be more than half full and that the fat should not be overheated. Most candidates mentioned that food should be put into the fat gently to avoid splashing and that there should be no water on the equipment or near the food to prevent spitting. It was usually advised that the pan must not be left unattended. Marks were gained for any valid points, with or without explanations.
- (b) Knowledge of food labelling tended to be limited. Most candidates noted that a date on the label informs the consumer of the date after which the food should not be consumed. Credit was given for stating any of the information food on a food label. This could have included the name of the food, its weight, the name and address of the manufacturer, storing, cooking, and serving instructions and perhaps a picture of the food. Many candidates correctly mentioned a list of ingredients although few stated that the list would be in descending order by weight.

- (c) All those who chose to answer this question were able to give a few correct facts about the care of food in a refrigerator but many points were too vague. No marks could be awarded to those who stated that foods should be kept in the proper place. A working temperature was expected. Most candidates correctly advised that raw meat should be stored at the bottom of the refrigerator so that nothing can drip onto cooked food, and that food should be covered to prevent cross contamination or the absorption of odours.

Since the care of the refrigerator was asked for in the question, those who omitted points on care could not gain full marks. All valid points concerning defrosting, cleaning the interior of the cabinet and replacing contents were credited.

### Question 7

This was the least popular question and was not well answered by those who chose it.

- (a) The nutritional value of pulses was not well known. Pulses are often given as an example of LBV protein but candidates did not seem to transfer their knowledge and list LBV protein as one of the nutrients in pulses. A few candidates correctly stated that Soya beans contain HBV protein. It was expected that fat, starch, NSP, iron, thiamine and nicotinic acid would be listed.
- (b) Many examples of pulses were known; full marks were frequently scored. Lentils or dhal was the most common example but the range of examples was wide.
- (c) Pulses are an important source of protein for vegetarians. This was often the only fact mentioned. Credit was given to those who noted that pulses are easy and cheap to produce and are easily stored. They are filling and provide energy in the diet. Better answers described how pulses can be mixed with other sources of LBV protein or with HBV protein in order to produce HBV protein.
- (d) It was a matter of some concern that the majority of candidates who attempted this question were unable to state that TVP is Textured Vegetable Protein and that it is made from Soya beans. A few candidates described how it could be formed into cubes or granules to resemble meat and that it could be used as a meat replacement or a meat substitute. It was hoped that it would be known to be low in saturated fat so would conform with dietary guidelines. All valid points were credited but responses were generally poor.
- (e) The preparation and cooking of pulses was explained well. The need for soaking was noted. Boiling or pressure-cooking was recommended. Better candidates noted that red kidney beans must be boiled for 15 minutes in order to destroy the toxins which occur naturally in the beans.

**Paper 6065/02**

**Practical**

### General comments on the planning section

It was sadly noted that many candidates do not know how to write a planning section. For example:

Many candidates do not know how to write a menu – the order of dishes for the meal was wrongly given. For example one candidate started with the sweet dish instead of the first course or main course.

Many candidates were penalised for not indicating the requirements for each part of the tests. For example in test 2, the dishes for the different sections of part (a) were not specified. The meal was not clearly indicated. Moreover, whenever one dish from part (a) was required for part (b) it was not clearly indicated. In many cases, it was not indicated at all. In a few cases, candidates simply wrote down a list of dishes which did not relate to any part of the test. Consequently, candidates lost marks. Candidates should be advised to indicate all requirements of the test by either underlining or writing underneath the dish chosen. Part (a) and part (b) should be clearly indicated.



## Terminology

It was noted that many candidates were not very familiar with certain terms. For example, two courses 'lacto vegetarian' were wrongly interpreted by many.

Some dishes were wrongly termed - for example:

- Quiche Lorraine was used by many candidates to designate any savoury quiche
- Candidates are not able to differentiate between a 'cake', 'a gateau' and small cakes.

## Comments on specific questions

The tests were straight forward and easy to understand.

Choice of dishes ranged from very good in a few Centres to quite poor and very poor for many candidates.

The more able candidates chose skilful dishes while others chose dishes which were quite simple. Many candidates did not pay attention to the specific requirements of the test. The meals were not always balanced. Variety of colour, texture and skill was not always considered. Accompaniments were far too simple or inadequate. In many cases, a fruit drink was chosen as a dessert.

## Question 2

This test required dishes illustrating

- (i) dextrinisation
- (ii) gelatinisation
- (iii) coagulation.

In general the choice for part (i) and (iii) were quite good but for part (ii), practically all candidates misinterpreted the term - gelatin dishes were chosen instead.

Part (b) required a 'two course meal' using one of the dishes from (a). Many candidates, failed to indicate which dish was selected from (a) for the meal. A few served a 3 course meal. In many cases, the meal was not balanced but more able candidates did make the right choice and skilful dishes were chosen.

## Question 3

For this test, the following keywords were missed by many candidates: 'Two course meal' and 'Three different types of convenience foods'. In some cases, the meal was planned but the convenience foods used were not indicated. Repetitive use of canned foods was used in many cases for all the dishes. A few candidates completely overlooked the term used – just a list of dishes was given instead. The responses to this test reflected a poor notion of the term 'convenience foods' and 'two course meal'.

## Question 4

This test was very straight forward and was well interpreted by most candidates. In general the choice of dishes for this test was good. This test required three cheese dishes each demonstrating a *different skill* and a midday meal, using one of them. The dishes varied from very skilful, skilful and in few cases, quite simple. In some cases, there was repetition of skills – for e.g. cheese scones (rubbing in) and cheese biscuits (rubbing in). Another candidate chose cheese scones and patties. Some chose dishes like pizza, cheese cake, cheese aigrettes.

The different skills were not indicated in most cases, except for a few. Concerning the second part of the test, the dish chosen from part (a) was not indicated. In many cases, the meal was not balanced.

**Question 5**

This test required a selection of dishes suitable for a party meal (sister's sixth birthday). Some candidates selected appropriate items for the occasion. Many served a meal while others served a list of finger food.

Many candidates simply ignored the 'sister's sixth birthday' and planned a meal which was not appropriate for the occasion, thus showing a lack of imagination and skill. For example 'spicy biryani' was served.

Very few candidates made a well decorated birthday cake. Many served a fruit gateau instead. All candidates included a drink.

**Question 6**

This question required a sweet dish and a savoury dish made from 'a batch of short crust pastry'. Although many candidates made correct choices for this part, only a few did make *one* batch of pastry, then divided the dough for the 2 dishes. In some cases, both dishes involved similar skill for example – quiche (savoury) custard flan (sweet).

Candidates should be reminded that marks are allocated according to the amount of skill shown in each dish.

For part **(b)**, a lacto vegetarian meal was required. Many candidates chose a non vegetarian dish for this part. The meal was not clearly indicated. In many cases, it was not balanced. Instead of a batch of small cakes, many served a cake.

In some Centres, candidates did not seem to be familiar with the term 'all-in-one method'. Many prepared a cake by the creaming method. All of them included a drink.