

C A R I B B E A N E X A M I N A T I O N S C O U N C I L

**REPORT ON CANDIDATES' WORK IN THE
SECONDARY EDUCATION CERTIFICATE EXAMINATION**

MAY/JUNE 2005

FOOD AND NUTRITION

FOOD AND NUTRITION
GENERAL PROFICIENCY EXAMINATION
MAY/JUNE 2005

GENERAL COMMENTS

The Caribbean Examinations Council administered its twenty-fourth examination in Food and Nutrition in June 2005.

Paper 01 – Multiple Choice Questions

Paper 01 was a multiple-choice paper which consisted of 60 items and carried a maximum of 60 marks. Marks ranged from 0 - 58 and the mean mark was 39 out of 60.

Paper 02 – Structured Essay Questions

This paper consisted of seven questions divided into two sections. Section I comprised three compulsory questions, on Nutrition, Food Preservation, and Food Preparation Methods respectively. Section II comprised four questions which tested the remaining modules of the syllabus. Candidates were expected to answer two questions from this section. Candidates were required to answer five questions in all. Each question was worth 16 marks. The maximum mark for the paper was 80. Questions 1, 2 and 3 were compulsory. Question 4 was the most popular question in the optional section.

Overall, the performance of candidates was fair. The marks ranged from 0 to 64 and the mean was 29 out of 80. Many candidates did not take time to read questions carefully and as a consequence missed the key words or phrases in some questions.

Generally, responses were well organized. However, some candidates responded to questions and failed to list the question number on the front of the booklet which created difficulties for the Examiners.

Paper 03 – School-Based Assessment

This paper was School-Based Assessment and consisted of three practical assignments. The first and third assignments were set and marked by the teacher. The second practical assignment was set by the teacher and assessed jointly by the teacher and an external examiner.

The mean mark on Paper 03 (SBA) was 47 out of a possible maximum of 60, with marks ranging from 0 to 60.

DETAILED COMMENTS

Paper 02 – Structured Essay Questions

Question 1

This question was a compulsory one and was handled very well. Marks ranged from 0 to 16, with the majority of candidates earning more than half of the marks.

Part (a) tested candidates' understanding of the benefits of dietary fibre and was very well answered. The majority of candidates were able to state correct responses.

Part (b) required candidates to list the causes of obesity and was also very well answered. Most candidates were able to gain the maximum marks. However, many candidates used words such as 'inheritance' or 'family inheritance' instead of 'heredity'. Quite a few candidates lost points when they listed 'too much fat', 'too many carbohydrates', 'too many calories' as separate points. Too much fat, and carbohydrates would mean that there are too many calories. As a result they were only able to gain one mark. Responses such as 'lack of exercise', 'abnormalities in metabolism', 'ignorance of dietary guidelines', 'emotional problems' are additional causes of obesity.

Part (c) (i) required nutritional reasons for consuming liver and orange juice together. The majority of candidates were able to gain full marks in this part of the question. There were some candidates who stated correct reasons as to why liver and orange taken together would, 'enrich one's blood'. However, instead of stating that the combination would provide 'haemoglobin', or 'build red blood cells' or 'prevent anaemia', they repeated part of the question 'enriches one's blood' and as a result did not receive full marks for that part of the question.

In Part (c) (ii), candidates were asked to support the statement that lacto-vegetarians could have a healthy diet. This was not done as well as it should have been as many candidates mentioned the nutrients but not the food sources, or vice versa. An example of the correct response would have been, 'Consumption of eggs, milk, cheese, TVP, pulses, legumes and cereals would provide protein. Carbohydrate intake would be had from cereals and cereal products and starch vegetables; fibre from fruits, vegetables and cereals; vitamins from fresh fruits and vegetables; minerals from dairy products and green and yellow vegetables; fatty acids from dairy products.'

Part (d) required candidates to suggest two symptoms of diabetes. Most candidates were able to get full marks by stating symptoms such as 'frequent urination, extreme thirst, itching of skin, blurred vision, numbness of feet, excessive hunger, weakness and tiring easily, tingly sensation'. Although there were many possible answers, some candidates were not able to gain any marks. Some of the incorrect responses were 'dizziness', 'regular urination' instead of 'frequent urination', 'poor eyesight' instead of 'blurred vision', 'heart attack'.

Question 2

This was also a compulsory question and focused on Preservation of Food and it was fairly well answered.

Part (a) required candidates to define the term 'dehydration' as used in food preservation. This was done quite well, although some candidates referred to 'dehydration of the human body'.

Part (b) requested candidates to list four reasons for preserving food. This was quite well answered. Many candidates scored full marks. The most popular responses were 'to make it last longer', 'to make use of food when it is cheap and plentiful and to store it for future use', 'to prevent microbial decay'.

In part (c), candidates were asked to suggest two reasons for each of the following statements:

- (i) *Pigeon (gungo) peas should be blanched before freezing.* This was fairly well answered. Most candidates gained one mark. The most popular response was 'to destroy micro-organisms/bacteria'. Correct responses such as 'to inactivate organisms', 'to prevent discolouration', 'to prevent textural change', or 'to prevent loss of flavour and aroma' were seldom stated.
- (ii) *Vitamins A and D must be added in the manufacturing of margarine.* This was not well answered. Some candidates gave the functions of the vitamins, totally ignoring the words 'during manufacturing of margarine'. Many were able to state 'to add nutritional value'. Few candidates were able to state that margarine was a substitute for butter and as mandated by law must contain the same nutrients as butter. Therefore, vitamins A and D must be added to make it acceptable. Some candidates stated that vitamin D was an antioxidant and therefore prevented rancidity and this was acceptable.
- (iii) *Colouring is added to certain foods during processing.* The majority of candidates were able to give one correct response. Many candidates incorrectly stated 'to add food value'. However, the majority were able to state correctly, 'to replace colouring lost during processing'. Other correct responses were 'to make it more appealing to the eye/palate', 'to increase demand'.

Part (d) dealt with faults in jam making. Responses to this part of the question were fairly good. Candidates were required to suggest two factors that would cause jam to be thick and sticky. Many candidates gave at least one correct response. The popular correct response was 'too much sugar'. However, correct responses such as 'overcooking of jam' and 'too little liquid' were also mentioned. Candidates were also required to suggest two factors that would cause jam to ferment. This was answered fairly well. Quite a few candidates gave the same responses for both parts of the question.

Question 3

This was also a compulsory question and focused on Food Preparation and Service and it was not well answered.

Part (a) required candidates to define the terms (i) herbs and (ii) spices. On the whole, this part of the question was poorly answered. Many candidates gave the same definition for both terms. Also, many candidates wrote about the medicinal attributes of certain herbs. Nevertheless, a reasonable number were able to state that herbs were used in food preparation for flavour.

In Part (b) candidates were asked to state two guidelines to be followed when using garnishes in food preparation. Candidates were able to answer this part very well. However, some candidates did not gain marks as they listed names of garnishes, or stated that sweet garnishes should be used for sweet dishes, or that garnishes should be edible. Decorations are used on sweet dishes. Garnishes are never used on sweet dishes. In order for any item to be classified as a garnish it must be edible.

Part (c) required candidates to suggest three guidelines that should be followed during (i) the making and (ii) serving of a salad. This was quite well answered and most candidates received full marks. However, some candidates were inclined to be repetitive, e.g. 'wash vegetables', 'clean vegetables', 'remove any insects from vegetables'. These were given as three points. Candidates were only awarded one mark. Many candidates strayed from the point and wrote about the personal hygiene of the individual preparing the salad, as well as that of the kitchen, ages of the persons, and the size of the family to eat the salad.

Part (d) asked candidates to suggest one way in which the following faults in beverage preparation could be avoided: (i) a cup of cocoa has a raw flavour and (ii) a pot of tea has a bitter taste. This proved to be very

challenging to the majority of candidates, as very few obtained any marks. Some candidates referred to the 'raw flavour' of the drink as that of 'raw cocoa bean'; others referred to 'raw cow's milk', 'not using enough milk', 'not adding enough sugar', 'too much cocoa used'. Very few candidates mentioned that the cocoa powder had to be blended with a cold liquid in order to prevent lumps, then added to hot milk or water, then boiled to ensure thorough cooking of starch grains. With reference to a pot of tea with a bitter flavour, far too many candidates wrote about a 'saucepan or cooking pot' rather than a teapot, and stated that the pot may have had other foods cooked in it. Many stated that the tea was boiled for too long. Some others stated that the 'bush' used was bitter. Very few candidates mentioned that the water had to be freshly boiled and the tea infused for three to five minutes.

Question 4

This question dealt with Nutrition and Meal Planning. It was a very popular question and was answered very well.

In Part (a), candidates were asked to state three conditions during which extra water was needed by the body. This was very well done, although some candidates gave the function of water instead. Correct responses such as 'during illness where a raised temperature results in increased sweating', 'when the body is dehydrated due to excessive vomiting and/or diarrhoea', 'in lactation when extra water is required for milk production', 'after intense physical activity and in very hot weather' were very common.

Part (b) was very well answered as the majority of candidates were able to give three functions of fat.

Part (c) (i) was also very well answered. Candidates were required to suggest three ways by which vitamin A and calcium could contribute to the health of the elderly. Some candidates did not note the words 'in the diet of the elderly' and gave general responses such as 'build strong bones and teeth' and 'necessary for growth' in the case of vitamin A. Correct responses were 'required to make a substance called visual purple, which is formed in the retina of the eye to see in dim light', 'required to keep the mucous membranes in the throat and the digestive, bronchial and excretory systems moist and free from infection', 'required for the maintenance and health of the skin'.

Part (c) (ii) required candidates to plan a three-course meal for an elderly person. The meal should include rich sources of vitamin A and calcium. Good sources of calcium are milk, cheese, yoghurt, ice cream, canned fish in which the bones are eaten, e.g. salmon, sardines, herring and green vegetables. Good sources of vitamin A are milk, cheese, eggs, butter, oily fish, liver and kidney. Beta carotene is found in carrots, pumpkin, spinach and tomatoes. The majority of candidates included dishes made from milk and cheese as the sources of calcium and yellow or green vegetables and liver as the source of vitamin A.

A three-course meal should be written using the following format:

Appetizer
Main Course
Dessert

Appetizers include soups, fruits and fruit juices.

A Main course should include a meat or fish or pulse dish, starch dish and a raw salad. Cooked vegetable/s can also be used. A combination protein and starch dish with a raw salad is another example of a main course. Cooked vegetable/s could also be included.

Desserts include fruit salads, ice cream, gelatine based cold sweets and cakes.

Many candidates omitted the appetizer, and included a drink. Many candidates wrote the drink in the main course. If a beverage is included it should be written after the dessert. A fruit drink is not necessary.

Although the majority of candidates obtained full marks for the menus, some lost marks because the menus were not nutritionally balanced. When planning meals, candidates must ensure that the meal contains protein, carbohydrates, vitamins A and C, iron and calcium. Some methods of cooking plus the nutrient content of the item/dish result in meals that are rarely devoid of fat. Suitable examples of menus given by candidates were:

Pumpkin Soup	Cream of Callaloo Soup	Fruit Cup
Stewed Pigeon Peas Spinach and Rice Tossed Salad	Grilled Flying Fish Scalloped Potatoes Buttered Carrots	Baked Chicken Breast Fried Breadfruit Slices Sauteed Squash
Mango Ice Cream	Fruit Salad	Chocolate Cake
.....		
Goat Water	Lentil Soup	Shrimp Cocktail
Red Beans and Rice Steamed Bodi/Bora Tossed Salad	Cheese Sandwiches Mixed Green Salad	Macaroni Pie Steamed Callaloo Arranged Vegetable Salad
Carrot Cake	Sweet Potato Pudding	Coconut Mousse

It should be noted that a few candidates selected a breakfast menu as a three-course meal. This is not correct as a breakfast menu does not have courses. Candidates should also note that the method of cooking used in the preparation of a dish should be written in the past tense as in 'Stewed Red Beans', 'Fried Chicken', 'Curried Beef'.

Question 5

This was not a popular question but was reasonably well answered.

The focus of this question was on kitchen equipment. Part (a) was reasonably well done. Candidates were required to list three desirable features or qualities that must be present in (i) a stainless steel saucepan or pot and (ii) a free-standing mixer. Candidates were able to gain marks for each of these. The most popular correct responses for the saucepan/pot were 'durability', 'a flat base that sits well on the burner', 'a lid that fits well and is easy to remove', and 'well fitting handles and knobs that do not become loose'. Popular correct responses for the free-standing mixer were 'attachments which are easy to use, assemble and dismantle', 'made of a durable material' and 'easy to clean and maintain'.

In Part (b) (i), candidates were expected to discuss two benefits a person would gain and one adjustment a person would have to make when using an upright freezer, after using a chest type for many years. This was fairly well done. Most candidates were able to give correct responses such as 'the upright freezer would take up less space', 'it would be easier to see contents', 'easier to pack and unpack'. For the adjustments, most candidates were able to state that 'it would be more costly and that large bulky foods could not be stored'. Many candidates confused an upright freezer with a one-door refrigerator and mentioned that the upright freezer did not hold as much as the chest type.

Part (b) (ii) required candidates to suggest five guidelines for storing food in the freezer. Candidates were able to give correct responses for this section.

In Part (c), candidates were asked to explain the procedure for the treatment of a scald. Most candidates were able to gain marks by stating that the hand should be placed under cold running water. However, the other acceptable responses such as 'pat dry with sterile cotton wool and apply burn cream' were not commonly provided by candidates.

Question 6

This question was not very popular and posed a challenge to the candidates.

Part (a) required candidates to define either the term 'smoke point' or 'rancidity'. Many candidates mentioned that a 'faint blue haze or smoke should rise from the heated fat' and were able to gain points. Many candidates stated that the 'blue haze should rise from the food'. Some candidates confused the term 'flash point' with 'smoke point'.

Very few candidates were able to give a correct response for a definition of the term 'rancidity'. Some mentioned 'spoilage of food' and 'rancidity of food'. The expected response was 'spoilage of fat caused by the action of water, oxygen, bacteria, or enzyme (lipase)'.

In Part (b), candidates were asked to state the differences between the processing of dried (powdered) milk and condensed milk. Few candidates were able to give correct responses to this question. Many candidates knew that most of the liquid was removed during the manufacture of powdered milk. However, in the case of condensed milk, candidates did not state that 60% of the water was removed and 40% sugar was added and that the milk was homogenized.

Part (c) was very well answered. The majority of candidates were able to state two disadvantages of bulk buying.

Part (d) focused on raising agents and performance was poor. Very few candidates were able to score marks. Candidates were requested to select two items from the list below and explain how a suitable raising agent worked in preparation of the items. The items were:

- (i) Swiss Roll
- (ii) Pancakes
- (iii) Chocolate Cake

Candidates did not provide clear explanations as to how raising agents worked. They focused on products that produced carbon dioxide e.g. yeast, baking powder and bicarbonate of soda. Some candidates even described the method of incorporating the raising agent as in, 'sift baking powder with flour'.

The three common raising agents are air, steam and carbon dioxide. Acceptable responses would have been:

Swiss Roll - during baking, hot air rises and moisture is converted to steam.

Pancakes - during frying, liquid is converted to steam and hot air will cause trapped air to rise.

Chocolate Cake - during baking, carbon dioxide gas is liberated from baking powder and vaporization of steam results in consequential rise.

Part (e) required candidates to describe the changes that take place during the boiling of porridge and the scrambling of an egg. This was very well done for the most part and many candidates received full marks. However, some candidates described the changes that take place when an egg is boiled or fried by mentioning

the changes that take place in the yolk and the white separately.

Question 7

This was the least popular question.

Part (a) required candidates to explain the principles involved in (i) pressure cooking and (ii) microwave cooking. This posed a challenge to the candidates. Many candidates were unable to differentiate between guidelines for use and principles involved in the processes.

In Part (b) (i), candidates were requested to suggest six ways, apart from the use of labour saving equipment, by which time and fuel may be saved during the preparation of a meal. There were over fifteen suggested responses for the question, yet candidates failed to score full marks. Although candidates were asked to exclude labour-saving equipment, many nevertheless gave responses such as the 'blender', 'food processor' and 'pressure cooker' could be used.

Some suggested responses are listed below:

- Prepare an efficient time plan and stick to it.
- Use quick methods of cooking, e.g., frying, grilling.
- Use convenience foods where possible.
- Use tender cuts of meat, chicken, fish.
- Prepare raw salads and desserts.
- Match pan and ring sizes on electric cookers.
- Regulate heat to avoid wasteful boiling / use residual heat.

In Part (b) (ii), candidates were asked to give four guidelines that should be followed in order to ensure that a buffet service is efficient. Many candidates gave general rules for meal planning such as 'the age, health, sex, number of persons eating the meal', others discussed 'the table cloth and decorations'. Very few focused on efficient buffet service. Generally, candidates did not score high marks on this question.

Candidates continue to use words and phrases from questions which they believe are correct answers to other questions. This should be discouraged.

Paper 03 – SCHOOL-BASED ASSESSMENT

Overall, the performance on the practical assignments ranged from good to satisfactory. Assignment TWO was assessed jointly by the examiner and the subject teacher. The maximum mark was 20, and many candidates were able to obtain high scores.

Administrative Details

A significant number of schools sent the correct assignment with the corresponding samples. However, in many cases, the assignments and mark schemes were not submitted.

Appropriateness of Activities

Assignments were structured by individual teachers or done collaboratively within individual territories. It was evident that specific modules and objectives in the syllabus formed the basis of these assignments. Primarily the samples submitted mirrored varying levels of skills and difficulties. To a limited extent, teachers did not

take full cognizance of the two and a half hours allotted for the practical session and as a consequence, the heavy demands imposed by the assignment necessitated more time for the completion. Conversely, the assignments that demanded less required less time.

Adherence to the Syllabus

The majority of assignments selected were in accordance with the syllabus guidelines.

Standard of Candidates' Work

Invariably, many candidates utilized a high percentage of indigenous foods. A small percentage of candidates did not demonstrate mastery in adapting recipes, thus extravagant quantities were produced.

Selection of Equipment and Materials

Some candidates misunderstood the requirements in this regard. Equipment was listed at random as the list was not specific to the tasks, while others completed a list of basic electrical appliances and in a few cases no list was prepared.

It must be reiterated that Special Equipment comprises items which are essential for the preparation and service of the dish/item. A list of basic tools and equipment such as measuring spoons, measuring cups, pots and pans, for example, is unacceptable.

Plan of Work

In spite of the fact that there was marked improvement in areas such as sequencing of activities, dovetailing and washing up, special attention should be paid to the following areas:

1. Organisation of activities should follow some logical sequence.
2. Weighing and measuring should be featured prominently.
3. Oven temperatures and length of baking time should be mentioned and adhered to as much as possible.
4. Time allocations for activities should not go beyond 15 to 20 minutes.
5. Handwriting should be legible and words properly spaced.

Quality of Teachers' Assessment

The assessment was satisfactory. A comparison of the teachers' score with that of the examiners suggests that the difference was marginal.

RECOMMENDATIONS TO TEACHERS

On the basis of the candidates' performance in the 2005 examination, there is need to re-emphasize the suggestions made in previous reports.

1. Every effort should be made to cover the syllabus as thoroughly as possible. Since in Part A of the examination there are three compulsory questions, one from each section of the syllabus and based on Modules 3, 6 and 11, teachers should test these Modules as often as possible.
2. Teachers should ensure that candidates are familiar with what is expected of them when command words such as *state*, *define*, *explain*, *outline*, *discuss* and *evaluate* are used to formulate questions.

3. During the course of study, candidates should become familiar with the vocabulary associated with the subject and should be able to spell these subject-specific words correctly.
4. Teachers should ensure that candidates develop examination techniques which are essential to high performance in the examination. For example, candidates should be encouraged to:
 - (a) read questions carefully and thoroughly in order to fully understand what is required, underlining the key words which indicate exactly what the response must address.
 - (b) answer all parts/sections of a question and to set out their responses clearly with correct numbering.
 - (c) present facts in a logical manner, avoiding lengthy responses which have no relevance to the question being answered, and to tabulate responses when required.
 - (d) express themselves clearly, through the practice of oral presentations or class discussions.