

CARIBBEAN EXAMINATIONS COUNCIL

**REPORT ON CANDIDATES' WORK IN THE
CARIBBEAN ADVANCED PROFICIENCY EXAMINATION
MAY/JUNE 2007**

FOOD AND NUTRITION

FOOD AND NUTRITION**ADVANCED PROFICIENCY EXAMINATION****MAY/JUNE 2007****GENERAL COMMENTS**

The Caribbean Examinations Council administered its fifth open examination in Unit 1 Food and Nutrition and its fourth open examination in Unit 2 in May 2007. There were some good responses to questions in both Units.

There are some areas of the syllabus where greater depth of coverage is required. These areas are highlighted in the detailed comments on individual questions.

Paper 01 - Short Answer Questions

Paper 01 in both Units consisted of nine compulsory short-answer questions. Candidates were required to answer all questions. There were three questions on each of the three Modules in the Unit. Paper 01 tested the grasp of critical nutrition principles and mastery of relevant skills. Candidates' performance was satisfactory. The maximum possible mark was 90. In Unit 1, the mean mark was 51.1 and in Unit 2, the mean mark was 51.8.

Paper 02 - Structured Essay

In Unit 1 and 2, Paper 02 consisted of seven essay questions which tested objectives across all Modules. It was divided into four sections. Section I consisted of one compulsory question spread across all the Modules. Section II to IV each comprised two optional questions and candidates were required to answer one question from each section. Questions in Section II were based on Module 1, those in Section III on Module 2, while questions in Section IV were based on Module 3.

The compulsory question in Section I was worth 45 marks and all others were worth 25 marks each. Overall, candidates' performance was good. The maximum possible mark was 120. In Unit 1 the mean was 70.0, and in Unit 2 the mean mark was 72.6.

Paper 03 - Internal Assessment

Paper 03, the Internal Assessment comprised a portfolio of two assignments. Candidates were expected to conduct research on a selected theme in the syllabus. The research in the first assignment was expected to form the basis of the experimentation and product development in the second assignment. Paper 03 is worth 90 marks and contributed 30 per cent to the candidates' final grade.

Performance on this paper was generally good, with a mean score of 60 out of 90 in Unit 1, and 64 out of 90 in Unit 2.

DETAILED COMMENTS**UNIT I****Paper 01****Short Answer Questions**Question 1

This question tested candidates' understanding of the benefits that infants derive from breastfeeding; anthropometric measurements required to assess growth in infants; and, strategies for increasing the iron intake of infants who are diagnosed with iron deficiency anaemia.

The overall performance of this question was good.

Part (a) of the question was well done. Most candidates were familiar with the benefits that infants derive from breastfeeding, even though some candidates gave general advantages for breastfeeding rather than those for infants.

Part (b) was fairly well done. Most candidates gave correct responses while some seem not to be familiar with the term 'anthropometric measurements'. Expected responses included height, weight, length and head circumference.

In part (c) (i) candidates identified suitable strategies for increasing the iron intake of infants diagnosed with iron deficiency anaemia.

Question 2

This question tested candidates' understanding of the difference between satiety and hunger, and the satiety value of identified snacks.

Candidates scored well in part (a). The majority of the candidates were able to clearly distinguish between satiety and hunger.

Part (b) presented some difficulty as candidates were unable to give comprehensive comparisons of the satiety value of the snacks identified. Candidates placed more emphasis on the nutrient content of the snacks.

Question 3

This question tested candidates' understanding of suitable food sources of calcium for vegans; ways of improving the absorption of calcium in the body; and, a reliable resource from which detailed information on foods in the Caribbean that are good sources of calcium can be obtained.

Question 4

This question tested candidates' understanding of menu planning for pre-schoolers and providing adequate dietary fibre in their diet.

Performance on this question was very good.

In part (a), which required candidates to plan a day's menu for preschoolers, the majority of candidates planned three main meals of the day, while only a few included at least one snack. The meals were not always suitable for toddlers, but many of the other factors involved in meal planning such as nutrition balance, format and aesthetics were considered.

Responses in part (b) indicated that candidates were familiar with ways of ensuring that pre-schoolers included adequate dietary fibre in their diet. The majority of candidates were able to list inclusion of fruits as well as vegetables and other high fibre foods.

Question 5

This question tested candidates' understanding of the production of trans-fatty acids, and the importance of giving information about the presence of fats on food labels.

The overall performance on this question was generally weak.

Performance on part (a) was poor. The majority of the candidates who attempted the question interpreted trans-fatty acids to be the same as saturated fatty acids.

A simple definition of how trans-fatty acids are formed during hydrogenation of poly-unsaturated lipids would have been adequate. Expected responses for foods containing trans-fatty acids include: margarine, non-dairy creamers, shortening, microwave popcorn, chips, crackers, doughnuts and other commercial baked goods

In part (b) most candidates demonstrated that they understood how the nutrition information on labels could be helpful to consumers. Explanations given were thorough and well written.

Question 6

This question tested candidates' understanding of safe food handling and the relationship between a clean hygienic environment and the quality of foods offered for sale.

The overall performance on the question was very good.

Performance on part (a) was excellent and it was evident that candidates enjoyed responding to this question.

In Part (b) most of the candidates correctly explained the relationship between a clean hygienic environment and the quality of foods offered for sale. Those who experienced difficulty described food safety and hygiene practices, rather than highlight how the quality of food would be impacted by a clean safe environment. Expected responses included:

1. food being free of contamination by microbes that cause spoilage;
2. food being free of micro-organisms which cause food-borne illnesses; and
3. clientele would grow and others would be attracted to the establishment.

Question 7

This question tested candidates' understanding of types of knives, and guidelines for their use and care to ensure safety in food preparation.

In general this question was answered well.

Part (a) was well done as the majority of candidates were able to identify different types of knives. Candidates continue to have difficulty with simple directions; for example, several of them did not make illustrations of the knives as required. On the whole, illustrations were not clear, and many candidates experienced difficulty in labelling the illustrations.

Performance on part (b) was good as the majority of candidates correctly stated guidelines for use and care of knives, though some candidates focussed on safety while using the knives rather than on care of the knives.

Question 8

This question tested candidates' understanding of the preparation of a chicken salad and safety measures that should be followed when placing a cooker in the kitchen.

The overall performance of the question was satisfactory.

In part (a) candidates were able to outline the steps required for the preparation of chicken salad as required. Most candidates included the need for clean-up and sanitizing before and after the cooking process. However, some candidates focussed on arranging the kitchen for efficient workflow rather than on the actual preparation of the meal.

Part (b) was not done well. Candidates' knowledge of safety measures for the placement of a cooker in the kitchen was limited. Expected responses include:

- (i) electric cookers should be installed by an expert using the correct electricity supply;
- (ii) gas cookers should be well fitted to prevent leaks, and can be fitted with an extension pipe to enable them to be moved for cleaning purposes;
- (iii) they should not be placed near curtains or drapery;
- (iv) guards can be placed around the hob to prevent children from pulling pans off the cooker.

Question 9

This question tested candidates' understanding of garnishing, decorating, and the cooking method – braising.

The overall performance on this question was weak.

Performance on part (a) was only fair. Most candidates were aware that both 'garnishing' and 'decorating' are used to enhance foods and were able to list examples of foods enhanced by both processes. However, the distinction between the two processes was not clear. It was expected that candidates would have indicated that 'garnishing' refers to attractively presenting **savoury** dishes, while 'decorating' refers to presenting **sweet** dishes.

Part (b) presented the most difficulty for the majority of candidates who were unable to list appropriate advantages of braising. Candidates confused this method of cooking with stewing. However, they were able to suggest suitable cuts of meat for braising.

Part (c) was not well done as many candidates were unable to describe the procedure for braising meat.

Paper 02

Structured Essay

Section 1 - Compulsory Question, Modules 1, 2 and 3

Question 1

This question tested candidates' understanding of the impact of adequate food intake on a child's health; comparing methods of determining nutritional status of young children; benefits of using the multi-mix principle of meal planning; planning meals for pre-schoolers; physical and chemical changes that take place in fish during grilling; and, garnishing of foods.

This compulsory question was attempted by all the candidates and the overall performance was satisfactory.

In part (a) (i) the responses were generally good. In response to the requirement to assess the impact of adequate food intake on a child's health, candidates correctly identified key nutrients and explained their impact. They also noted factors such as 'avoidance of illnesses and infections' and 'concentration on school work'.

In part (a) (ii) candidates experienced very few problems identifying methods of determining nutritional status of young children; however, very few were able to clearly make comparisons.

Part (b) proved to be challenging to most candidates and even though there was evidence that they were familiar with the benefits of using the multi-mix principle, candidates were not skilled when planning meals using the principle. Expected responses included the following:

- (i) using a variety of foods from different food groups;
- (ii) choosing foods from within groups that are in season;
- (iii) choosing a staple food first then adding a food from animal or legumes;
- (iv) if using a legume as the protein source, use a cereal food such as rice, wheat or corn.

Most candidates were not familiar with the various options for the THREE MIX which are:

- Staple + Food from Animal + Vegetable
- Cereal + Legume + Vegetable
- Staple + Food from Animal + Legume

Although candidates were familiar with nutrition information on food labels that relate to fat content they could not always explain what each meant.

In part (c) (i) instead of planning a three-course meal as required, some candidates planned two-course menus. In addition, candidates seem not to have read the question well, as evidenced by their inability to include grilled fish as one of two entrees.

Many candidates were able to outline changes that take place in fish during grilling. Part (c) (ii)

required the candidates to illustrate two different garnishes suitable for fish. The majority of candidates identified garnishes but did not provide illustrations.

SECTION II - Module 1

Question 2

This question tested candidates' understanding of nutrition-related chronic diseases that are common in the Caribbean and their prevention and control.

This question was attempted by 97 per cent of the candidates. The overall performance on this question was very good.

Performance on part (a) was very good. Most candidates adequately described several nutrition-related chronic diseases. Obesity was not accepted as a chronic disease. Obesity is widely known as a disorder which pre-disposes people to chronic diseases; however it is not a disease in itself. Therefore, candidates were not awarded points for listing obesity.

In Part (b) most candidates were able to identify general guidelines for prevention and control of chronic diseases.

In Part (c) which required the identification of the chronic disease that is most prevalent in their country and the possible reasons for its high rate of occurrence, candidates responded well. Their responses indicated that they have a clear understanding of the issues contributing to the chronic diseases in their respective countries.

Question 3

This question tested candidates' understanding of energy balance and the requirements for creating a high energy local beverage.

This question was attempted by 3 per cent of the candidates.

Performance on this question was poor.

In Part (a) (i) candidates were required to explain the factors to be considered when comparing the energy needs of a sixty-year old father and his nineteen - year old son who is an athlete. The stimulus information that they both exercised at a gym, provided two clear indications of differences in age and activity level. Additional responses are given below:

- (i) physiologically the son was still growing and was required more energy for growth;
- (ii) the son was likely to be spending more energy in his daily activities because of his athletics;
- (iii) the person with the greater muscle mass would burn more energy; and,
- (iv) the health status of the father was likely to affect his energy needs

Part (a) (ii) required candidates to develop a recipe for a high energy local drink as an alternative for the expensive one which the father frequently purchased. Those who attempted this, created excellent recipes; however, they did not always include adequate sweeteners. It was expected that this type of drink should meet the following criteria:

- (i) contain a carbohydrate such as sugar or honey, oats, wheat germ and bananas;
- (ii) contain protein, such as soy, whole or skimmed milk, eggs or egg white, protein powder, ground beans;
- (iii) contain a source of vitamins such as fruits, dried fruits, vegetables, nuts;
- (iv) have a good blend of taste;
- (v) include a method which shows how the ingredients are incorporated.

In Part (b) (i) candidates were given the appropriate information regarding the son's energy output and metabolic rate, and they were required to calculate the additional calories needed to achieve energy balance. This necessitated the addition of his daily energy requirements and then the subtraction of his energy intake from his energy need. For example:

BMR = 1,650 kcal daily activities 1,500 kcal daily intake 2,800 kcal

$$1,650 + 1,500 = 3,150$$

$$3,150 - 2800 = 350 \text{ kcal}$$

Part (b) (ii) stated that the son consumed 500 additional calories per day. Candidates were expected to calculate the number of days needed for him to gain 10 lbs. The following calculation was expected:

$$10 \text{ lbs body weight} = 3,500 \times 10 = 35,000 \text{ kcal}$$

$$\text{time needed} = 35,000 / 500 = 70 \text{ days}$$

SECTION III - Module 2

Question 4

This question tested candidates' understanding of the differences and similarities between the nutrient content of freshly picked spinach and canned pureed spinach and conserving nutrients during preparation and cooking.

This question was the more popular one in this Module and was attempted by 65 per cent of the candidates. The overall performance was very good.

Performance on part (a) was good. Many candidates made good comparisons of the nutrient content of freshly picked spinach with that of canned pureed spinach. They were knowledgeable of the nutrients affected by heat application and the processing required for canning. However, not many candidates associated canning with higher sodium content.

Part (b) was well done as most candidates gave suitable responses for ways to incorporate vegetables into breakfast dishes.

In part (c) candidates were asked to discuss methods of conserving nutrients when preparing and cooking vegetables. Some candidates focussed on either preparing or cooking. Candidates would have gained a better chance of scoring maximum points if they focussed on both the preparation and cooking of vegetables.

Question 5

This question tested candidates' understanding of planning four-course dinner menus; the nutritional content supplied by the Caribbean six food groups; and, the effects of over-consumption of vitamins.

This question was attempted by 35 per cent of the candidates.

Performance on part (a) was satisfactory. While some of the candidates were able to plan nutritionally balanced menus, the majority wrote THREE-course menus instead of the required FOUR-course menu. Some candidates wrote several courses, each of which was a main course. The expected pattern was:

Hors d'oeuvres or salad course
Soup or fish course
Main course
Dessert

Some candidates omitted the group, legumes, from the Caribbean six food groups.

In Part (b), candidates were aware of major nutrients supplied by each of the food groups.

Part (c), was generally well done, as most candidates were able to identify vitamins that may be harmful in excessive quantities, and state the effects of over-consumption of these vitamins.

Section IV - Module 3Question 6

This question tested candidates' understanding of recipe modification to make dishes appropriate for elderly diabetics; and, sensory evaluation.

Performance on this question was fairly good. The question was attempted by 89 per cent of the candidates.

Performance on part (a) was very good. Most of the candidates were able to give suitable adaptations to the recipes provided to make them appropriate for elderly diabetics. A rationale given was that they were nutritionally strong as they focussed on reduction of fat, meat, and sugar.

Part (b) was fairly well done as candidates were able to identify general guidelines for conducting the sensory evaluation of modified recipes, such as: preparation of samples; provision of warm water for mouth rinsing between samples; and, using an evaluation device for recording. However, in most instances candidates did not specifically relate their responses to the dishes they adapted at part (a). For example, candidates needed to include: serving the gumbo hot and that persons from the targeted group - elderly diabetics - should make up the team of persons doing the evaluation.

In part (c) candidates were required to discuss the relationship between sensory characteristics of food and the nutritional status of an individual. Many candidates were able to define sensory characteristics of foods but were unable to define nutritional status or to establish the relationship between the two. Candidates should have been able to state that:

- (i) food may be nutritious, but if it is not appealing in odour, flavour, texture or mouth feel, it may not be eaten;
- (ii) elderly persons or persons who may have a health condition which diminishes their senses need to have foods that are quite appealing, to encourage them to eat and to be adequately nourished;

- (iii) people tend to overeat foods that are particularly appealing to them. This can lead to obesity and other nutrition-related health conditions if the foods they indulge in are high in saturated fats and simple carbohydrates.

Question 7

This question tested candidates' knowledge of preparing coconut mousse and choux pastry shells for chocolate eclairs; and, first aid techniques for injuries sustained in the kitchen.

Performance on this question was unsatisfactory. The question was attempted by 11 per cent of the candidates.

Performance on Part (a) was unsatisfactory. Even though most of the candidates were familiar with the products, they did not know how the preparation was done and were unable to give a sound rationale for each step of the preparation.

In Part (b) (i) some candidates correctly identified the first action to be taken to treat different injuries that may be sustained in the kitchen and gave appropriate reasons for each action.

Part (b) (ii) required candidates to identify signs that would indicate to first-aiders that they should urgently seek professional medical assistance. Many candidates gave vague responses such as "when the first-aiders cannot do anything else". Expected responses included:

1. when there is a lack of vital signs of life;
2. loss of consciousness;
3. severing of a limb;
4. excessive bleeding;
5. severe swelling or pain; and
6. third degree burns.

UNIT 2

Paper 01

Short Answer Questions

Question 1

This question tested candidates' understanding of the major factors which impact on household food security, and the relationship between food security and food safety.

The overall performance on this question was satisfactory.

In part (a) even though many candidates did not use the words 'availability' and 'accessibility' they were able to identify the factors which have an influence on availability and accessibility, such as poverty, poor storage conditions, natural disasters and level of food production. This indicated that they were indeed aware of the factors which impact on household food security.

Candidates responded poorly to part (b). Most of the candidates were unable to adequately define the terms 'food security' or 'food safety'. As a result, they could not clearly establish the relationship between the two.

Question 2

This question tested candidates' understanding of the Hazard Analysis Critical Control Points (HACCP) and reasons why the traditional mortar and pestle may be hazardous to the food preparation process.

The overall performance on this question was good.

In part (a) the majority of candidates responded to this section reasonably well. It was evident, however, that many candidates had difficulty in differentiating between 'hazard' and 'hazard analysis' while 'critical control points', did not present as much difficulty as the other terms.

In part (b) candidates were required to give reasons why the traditional mortar and pestle may be hazardous to the food preparation process. It would appear as though many candidates were not familiar with the mortar and pestle and, therefore, could not respond appropriately.

Question 3

This question tested candidates' understanding of providing safe food and drinking water after a disaster, and strategies that food and health agencies should use to ensure that persons are adequately nourished during this period.

The overall performance on this question was fairly good.

Candidates responded well to part (a). However, some of them tended to repeat their responses in a variety of ways.

In part (b) candidates showed an excellent understanding of strategies that food and health agencies should use to ensure that people are adequately nourished during a period of extensive flooding. Popular responses include:

- (i) provide soup kitchens for vulnerable groups;
- (ii) control food prices;
- (iii) ration foods to communities;
- (iv) supply affected areas with vitamin and mineral supplementation;
- (v) supply communities with fortified foods;
- (vi) place vulnerable groups in shelters or hospices; and,
- (vii) provide a help hotline for those who have difficulty accessing food.

Question 4

This question tested candidates' understanding of the processes – syneresis, hydrogenation, homogenization; and, the benefits of fortification and enrichment to Caribbean populations.

The overall performance on this question was very poor.

Performance on part (a) was poor. Most candidates seemed to be totally unfamiliar with the processes, syneresis, hydrogenation, and homogenization. Many did not even attempt to give definitions, though a few candidates knew that homogenization had 'something to do with milk'.

In part (b) many candidates could not distinguish between the processes of fortification and enrichment, but indicated that both involved the addition of nutrients. Expected responses on the benefits to Caribbean populations were: improves the nutrient content of foods to increase intake of nutrients; addresses micro-nutrient deficiencies in the population; is a cost effective way of addressing micro-nutrient deficiencies; and, compensates for nutrients lost during the manufacturing process by replacing nutrients lost during manufacture.

Question 5

This question tested candidates' understanding of the procedure for blanching vegetables; and, criteria used by Food Protection Agencies to approve the consumption of manufactured vegetables.

Part (a) presented some difficulty. However, some candidates were still able to give a few steps in the procedure.

Performance on part (b) was very poor since candidates appeared to have little knowledge regarding the criteria used by Food Protection Agencies to approve the consumption of manufactured vegetables.

Question 6

This question tested candidates' ability to compare the suitability of foil packets or pouches and glass jars as packaging for pineapple jam; and to calculate the cost price and selling price of a batch of the jam.

The overall performance on this question was unsatisfactory.

Responses indicated that candidates found part (a) to be interesting and were able to make appropriate comparisons.

Part (b) was poorly done as many candidates could not calculate the cost price and selling price of a batch of the jam. Candidates needed to follow the process listed below

- (i) Indicate cost of the following:
 - (a) ingredients
 - (b) fuel
 - (c) labour
 - (d) packaging
- (ii) Add these costs to arrive at cost price.
- (iii) Indicate a percentage mark up on the cost price which would give the profit.
- (iv) Calculate the mark up.
- (v) Add the mark up to the cost price to arrive at the selling price.

Question 7

This question tested candidates' understanding of guidelines for preparing packed lunches for young children, and evaluating menus.

The overall performance on this question was good.

The majority of candidates performed well in part (a) as they gave appropriate guidelines for preparing packed lunches for young children.

Performance on part (b) was good. Many candidates were able to identify faults with the given menu, but did not always suggest suitable changes.

Question 8

This question tested candidates' understanding of local dishes that included local fruits and vegetables; and, food safety when preparing meals outdoors.

In part (a) candidates were given a scenario which referred to a traditional wedding menu that provided mainly meats, starches and simple sugars. They were required to suggest suitable dishes using local fruits and vegetables. This section was generally well done even though some candidates listed local dishes but did not pay attention to the fact that fruits and vegetables had to be included.

Part (b) was well done as candidates gave appropriate responses to safety measures to be practised when preparing meals outdoors.

Question 9

This question tested candidates' understanding of planning three-course lunch menus for vegans, and strategies for controlling the cost of menus.

The overall performance on this question was good.

Performance on part (a) was fairly good. Most candidates developed appropriate menus but did not always pay attention to the fact that the menu was for a vegan and they included meat dishes. Some menus did not include three courses as required.

In part (b) the majority of candidates responded fairly well as they gave strategies for controlling the cost of menus. Expected responses included: use fruits and vegetables that are in season; use standard portion sizes; use local foods; buy food in bulk; avoid the inclusion of too many expensive items on the menu; avoid wastage; use standardized recipes; and, prepare a budget.

Paper 02

Structured Essay

Section 1 - Compulsory Question, Modules 1, 2 and 3

Question 1

This question tested candidates' understanding of indigenous Caribbean dishes and traditional tools or equipment; nutrient conservation; preservation of fruits; nutritional labelling; preparation of entrees; and, Hazard Analysis Critical Control Points.

This compulsory question was attempted by all candidates.

The overall performance on this question was good.

In part (a) (i) most candidates gave very good responses when they identified traditional tools or equipment used to prepare indigenous Caribbean dishes, while some candidates continued to give vague responses such as "wooden spoon". More appropriate responses for this question include 'cou cou', 'turn' or 'swizzle stick'. A few candidates selected tools such as the 'mortar and pestle', 'matapee', 'dutch pot' and 'coal pot' but were unable to explain the use of these.

Similarly, some of the dishes chosen were not reflective of traditional dishes. While 'Fried Chicken' or 'Fried Fish' are generally not considered indigenous, dishes such as 'Jerk Chicken' or 'Fried Flying Fish' are considered to be native to specific territories.

In part (a) (ii) most candidates adequately outlined preparation and cooking practices necessary for conserving nutrients in dishes selected at (a) (i), even though some dishes selected did not lend themselves to a good explanation of conservation. Generally expected responses included:

- (i) cooking by the conservative method;
- (ii) utilizing the pot liquor to cook other items;
- (iii) cutting vegetables with a sharp knife to avoid bruising;
- (iv) avoiding the use of baking soda to soften the foods as this leads to loss of vitamin B; and
- (v) avoiding the soaking of beef, or vegetables in water.

Performance on Part (b) (i) was generally good although some candidates experienced difficulty identifying reasons for preserving fruits. Popular responses included; for export; to prevent spoilage; to have the fruit when it is out of season; to utilize excess fruit during a glut; to create a wider variety of foods; for convenience and ease of use; and, for use in other recipes such as fruit flans, cakes and puddings.

Part (b) (ii) was not properly answered. Most candidates focussed on general information required on labels and not on nutritional information. Expected responses included: 'serving size', 'servings per container', 'number of calories per serving', 'calories from fat', 'percentage of fat', and, claims such as 'fat free' or 'low fat'.

For part (c) candidates showed a lack of understanding of the meaning of the term 'entree'. This prevented them from selecting appropriate dishes. However, they were able to outline the preparation steps for the dishes chosen. Candidates must be reminded that the term 'preparation' includes pre-preparation as well as cooking. Candidates were able to describe the appropriate precautions for each of the HACCP critical points - purchasing, pre-preparation and cooking.

Section II – Module 1

Question 2

This question tested candidates' understanding of factors that influence food choices of teenagers in the Caribbean, and traditional dietary practices of Caribbean people.

This question was attempted by 80 per cent of the candidates.

Part (a) was generally well done, as candidates gave well-explained appropriate responses. Popular responses included: advertising; peer pressure; preference for fast foods; tradition and culture; exposure to nutrition education; body image and the desire to have the physique of a model or movie star; ease of obtaining fast foods and the availability of vending machines; use of food to cope with emotional stress; and, the influence of tourism.

In part (b) the majority of candidates showed a high level of understanding of the ethnic groups that influenced the diets of Caribbean people as well as traditional practices and dishes of each group. A few candidates were uncertain about the origin of some practices.

Question 3

This question tested candidates' understanding of national dishes in their territory; the health impact of nutrients in the dishes; and, strategies that can be used to educate the community about food fallacies.

This question was attempted by 20 per cent of the candidates. The question was generally well done.

In part (a) many candidates correctly identified national dishes and the health impact of the nutrients contained in the dish. It must be borne in mind that "impact" does not connote either negative or positive effects. Therefore candidates should discuss the impact of excessive intake as well as the functions of the nutrients.

Part (b) was well done as candidates showed an understanding of the term 'food fallacy', and gave excellent strategies for communicating to their community about food fallacies.

Section III – Module 2Question 4

This question tested candidates' understanding of dehydration as a method of preservation; functional foods; and, the role of phytochemicals in promoting good health

This question was attempted by 10 per cent of the candidates.

The overall performance on this question was satisfactory.

Performance on part (a) was satisfactory. Although most of the candidates were able to describe the stages in the processing of fruits using dehydration as the method of preservation, they could not give full descriptions and few of them knew all the stages. Stages in this type of production include: harvesting; transportation; selection; preparation of the product; dehydration process; post dehydration treatment; and, packaging.

Candidates performed better in part (b) as they were able to correctly give the meaning of the term 'functional foods' and give examples of these foods.

Part (c) was also well done as candidates outlined the functions of phytochemicals in promoting good health. Popular responses included the inhibiting of substances that prevent the initiation of cancer and serves as anti-oxidants that prevent and repair damage to cells due to oxidation. Other possible responses are they act as hormones; modify the absorption, production or utilization of cholesterol; decrease the formation of blood clots; and, contribute to maintenance of healthy vision and digestive tract.

Question 5

This question tested candidates' understanding of the benefits of safe handling instructions and nutrition information on food labels; and, the advantages of using plastics as packaging for foods.

This question was attempted by 70 per cent of the candidates.

The overall performance of this question was good.

Part (a) was fairly well done by the candidates who attempted this question. Many candidates were more familiar with the benefits of nutrition information than with safe handling instructions on food. They needed to note that safe handling instructions help consumers to: prevent wastage; prevent accidents; keep food safe to eat; retain the quality of the food; and, retain the overall texture and taste of food.

In part (b) most of the candidates were able to provide safe handling instructions found on labels. However, many of the responses did not directly relate to those found on food labels. Expected responses were: keep foods refrigerated or frozen; cook meat, poultry and seafood thoroughly; refrigerate after opening; thaw frozen foods in the refrigerator or microwave and use within three days after opening.

Part (c) was fairly well done as candidates gave favourable responses. Scores on this question could have been improved if candidates had followed the instructions given. This question required candidates to discuss the advantages of using plastics as packaging for foods. Most candidates listed points without any discussion. For example, rather than just writing 'it provides a barrier against moisture' candidates should mention that plastics are suitable for foods that would be affected by moisture such as cookies or bread, since the packaging would prevent moisture from entering and allow the cookies to remain fresh and crisp for the duration of their shelf life.

Section IV – Module 2

Question 6

This question tested candidates' understanding of the use of the multi-mix principle to plan menus; and, menu planning principles.

This question was attempted by 30 per cent of the candidates.

The overall performance on this question was very good.

In part (a), many candidates used the multi-mix principle to plan excellent menus for one day for a group of lactating mothers. Weaker candidates planned only the three major meals, while some planned only one meal. At this level it was expected that candidates would have adhered to general menu planning principles such as nutritional balance, aesthetics, and format.

Part (b) was satisfactorily done by the majority of candidates. From responses given candidates confused factors to be considered when planning meals, and those for planning menus. Menu-planning principles include some meal planning considerations but are considered in the context of institutional food service, as they include special needs of guests; aesthetics (colour, texture and good blend of tastes); nutritional balance; type of meal service to be offered; and, cost of components.

Question 7

This question tested candidates' understanding of factors for determining portion sizes in food establishments, and food safety measures that should be practised when providing buffet service.

This question was attempted by 70 per cent of the candidates.

The overall performance on this question was satisfactory.

Performance in part (a) was weak. Candidates were expected to give responses such as: use of standardized recipes; cost of ingredients used in the dish and overheads; type of service offered by the food establishment; age group of the clientele; type, theme and tradition of the establishment; needs of the clientele; and, location of the establishment.

Candidates' responses to part (b) were generally fair. Some candidates repeated the same points several times and tended to focus on general hygiene practices in food handling rather than on food safety measures when providing buffet service.

INTERNAL ASSESSMENT

This paper consisted of a portfolio comprising two pieces of work which tested objectives across all Modules. Candidates, in consultation with the teacher and the guidelines provided by the Caribbean Examinations Council, selected the activities.

The first assignment was marked out of 30, while the second was marked out of 60. The overall performance of the candidates has shown great improvement.

The majority of portfolios were very well organized and presented. Most of the illustrations were clear and creative. In some instances the quality of the assignments was appropriate for the Advanced Proficiency Level while others were not of the standard expected at this level. It is imperative that teachers are aware that a portfolio should be submitted, instead of two distinct pieces.

Some candidates submitted exemplary portfolios. The work of these candidates was scientifically based and rigorous. These candidates are to be highly commended for their effort.

Several teachers seemed to use the old syllabus. Teachers are asked to ensure that the current syllabus is used for the preparation of candidates.

Assignment 1

Research

Most of the candidates selected appropriate topics and demonstrated knowledge of relevant facts. In most cases literature reviews were comprehensive, but sources used were not always cited. Data were well presented, but very little reference was made to the data. In several cases inferences, predictions, or conclusions were not attempted by the candidates. The conclusions and recommendations were not accurately or scientifically based and were not supported by the analysis of data.

Assignment 2

Experimentation and Recipe Modification

Candidates selected appropriate experiments and demonstrated knowledge of relevant facts. Reports were well written and presented. Many of the candidates did not formulate hypotheses, and the procedures for experiments were in most cases not clearly documented. A large majority of the candidates showed very little evidence to prove that they modified the product after critical or unexpected outcomes.

RECOMMENDATIONS TO TEACHERS

Overall the performance on the examinations was satisfactory. Performance can be improved if recommendations to teachers are used as guidelines to help address weaknesses of candidates. Although candidates had an understanding of concepts they did not elaborate and fully develop answers as was expected at the Advanced Proficiency Level. Some candidates were not fully prepared for this level of examination. It was also clear that they were not familiar with some areas of the syllabus and so they performed poorly or omitted parts of questions. Candidates should, therefore, cover the entire syllabus so that they can satisfy the requirements of the examination. Greater emphasis must be placed on those concepts which can be regarded as current areas of nutrition.

Candidates should be encouraged to follow the guidelines given below:

- Read questions carefully, paying attention to key words.
- Place emphasis on comprehending reasons for certain principles and procedures, rather than just learning by rote.
- Develop responses fully, paying attention to the marks allocated for each part of the question.
- Answer questions with a variety of key words, namely: discuss; explain; list; describe; and define. Ignoring these command words and simply listing responses when required to explain, for example, resulted in candidates' inability to gain as many marks as possible.
- Participate in mock examinations using past examination papers and administered under examination conditions in order to develop good examination techniques.
- Utilize different media to become familiar with current nutrition issues.
- Place emphasis on research techniques, case studies and problem solving.
- Engage in field trips and work attachments. These would help students to understand fully many nutrition concepts such as methods for assessing nutrition status of children; complementary feeding and breastfeeding; nutrition-related disorders; and practices and procedures for ensuring safety of food, for example.
- Engage in practical exercises in the identification and use of the nutritive value of food not categorized in the food groups, namely; functional/genetically engineered foods; fat replacers; sugar, salt and other substitutes; and convenience foods.
- Develop ideas, and demonstrate clarity of expression. In many cases candidates showed some knowledge of the concept being tested, but could not adequately respond to questions to the standard that is required at the Advanced Proficiency Level.
- Adhere to general directions. Many candidates ignored the instruction to begin each question on a new page. In some cases candidates did not keep parts of a question together. They should be advised to leave a blank page in the workbook when going on to a new question, if the previous question has not been completed. Also, the question number must be written in the space provided.

Internal Assessment

Candidates should be encouraged to:

- Seek guidance in choosing topics for projects as well as throughout the entire exercise.
- Select topics that are of interest to them and that relate to a problem in the region or community. This should ensure that there is ownership and motivation for the project.
- Note that literature reviews for each assignment do not have to be extensive, but, should be thorough enough to outline the problem and research relevant to the same. This cannot be adequately done in two to three pages. Students must utilize a variety of sources and should be taught the APA referencing style for citing sources and developing a reference list.
- Develop rationales and explain the significance of the topic.

Assignment 1 - Research

Candidates must not only present the data but they should discuss the data clearly. They are not expected to present data on all of the questions, but should discuss all of the questions asked on the questionnaire or interview.

Efforts should be made to guide candidates in making simple inferences, and drawing conclusions yielded from the data. Give a summary or conclusion at the end of the project.

Assignment 2 - Experimentation and Recipe Modification

Candidates should be advised that a detailed report must be written, which accurately records and reports all observations.

Efforts should be made for candidates to understand that experiments are not completed on a one-shot basis. It is necessary to repeat and modify experimental methods after critical or unexpected outcomes.

Efforts should be made to introduce students to the role of product development and recipe modification. In addition, demonstrations should be completed before candidates engage in their individual assignments.

Candidates should be advised that product development or recipe modification is more than removing or changing one ingredient or just throwing ingredients together. This assignment entails detailed experimentation which usually necessitates several trials prior to reaching success. For this reason it should involve the altering of several ingredients, hence baked products is suggested as an example for modification. For example, at this proficiency, it is unacceptable to modify the amount of fat or salt in beef stew and view this as competent work. Therefore, significant ingredients should be altered.

Each modification should be explained in detail, giving reasons why the particular modification was done. After an unexpected outcome, changes should be noted by making a statement concerning the specific modification. For example, when making a jam, the product did not set; therefore, more lime juice was added to the next modification. Examiners are not expected to compare the recipes to verify the changes that were made to the recipes.

Variations of basic recipes are not expected at this proficiency as a modification. For example, the original recipe plain cake and the modified recipe coconut cherry cake is unacceptable.

Candidates should give the original recipe and then conduct at least two modifications.

Experiences must be provided for candidates to fully understand that a recipe is a formula, thus, any change in an ingredient will necessitate a substitution of ingredients. Reliable and quality products cannot be achieved on a one-shot basis.

Efforts should be made for candidates to understand the role of major ingredients used in recipes, especially baked items. For example, if the amount of sugar in a creamed mixture is changed there must be a suitable substitute or the texture and flavour of the cake will be changed. The goal of recipe modification is to make changes to the ingredients yet retain the flavour, colour, shape, texture and acceptability of the product. Similarly, product development entails creating a product which is pleasing to consumers.

Candidates should be encouraged to use food composition tables to determine energy values for the original and new product.

Candidates should be encouraged to formulate valid hypotheses.

Candidates should be encouraged to record and report methods, observations and results accurately, using tables or graphs.

Candidates should include the results from the sensory evaluation in their discussion.

Candidates should develop a conclusion to summarize their findings.