

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL  
ADVANCED CERTIFICATE OF SECONDARY EDUCATION  
EXAMINATION**

**155/2**

**FOOD AND HUMAN NUTRITION 2**

(For Both School and Private Candidates)

**Time : 3 Hours**

**ANSWERS**

**Year : 2004**

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**Instructions**

1. This paper consists of sections **A** and **B**.
2. Answer all questions in section **A** and only **two (2)** question from section **B**.
3. Non-programmable calculators may be used.
4. Communication devices and any unauthorised materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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## SECTION A

### **1. Explain five dietary assessment methods that can be applied in community nutritional status surveys.**

The 24-hour recall method is one of the most common approaches. In this method, individuals are asked to recall everything they ate and drank in the previous 24 hours. It is simple and quick but depends heavily on memory and honesty.

The food frequency questionnaire collects information about how often certain foods are consumed over a specific period, such as weekly or monthly. It provides a good picture of long-term dietary patterns and habits.

Food diaries or dietary records involve participants recording everything they eat and drink over several consecutive days. This method is more accurate than recall, but it requires literacy and commitment from respondents.

Weighed food intake records involve weighing all foods before consumption and also weighing leftovers. This method is very precise but can be expensive and time-consuming, making it less practical in large surveys.

Household food consumption surveys estimate food availability and intake at the household level by assessing all food purchased, produced, and consumed. It provides useful data but does not account for distribution among individuals in the household.

### **2. Identify six personal hygiene practices that food handlers should observe to provide safe food.**

Food handlers should wash their hands thoroughly with soap and clean water before handling food and after using the toilet. This prevents transmission of harmful microbes.

They should keep fingernails short and clean to reduce the risk of dirt and bacteria being transferred into food.

Clean protective clothing such as aprons, caps, and gloves should be worn while working in food preparation areas to reduce contamination.

Food handlers should avoid handling food when they are sick, especially with illnesses like flu, diarrhea, or skin infections, since these can contaminate food.

Hair should always be tied back or covered with a cap or hairnet to prevent hair from falling into food.

Food handlers should refrain from habits such as coughing, sneezing, or smoking while handling food, as these can release pathogens into the food.

### **3. Define food and nutrition policy and explain three roles of the Ministry of Trade and Industry in its implementation.**

A food and nutrition policy is a government's plan of action that outlines objectives, guidelines, and strategies to improve the nutritional well-being of the population, ensure food security, and regulate food production and distribution.

One role of the Ministry of Trade and Industry is enforcing food safety regulations. It ensures that all foods produced, imported, or sold in the country meet safety and nutritional standards.

Another role is promoting food processing industries. The ministry encourages the establishment of agro-based industries that add value to local food products and make them more widely available.

A third role is regulating labeling and packaging. The ministry ensures that consumers have accurate nutritional information about foods, enabling them to make healthy choices.

### **4. Mention three foods linked with staphylococcal food poisoning and explain four steps to prevent its incidence.**

Foods commonly linked to staphylococcal food poisoning include cream-filled pastries, dairy products like milk and cheese, and cooked meat or poultry products. These foods provide the right conditions for bacterial contamination and toxin production.

The first step to prevent staphylococcal poisoning is maintaining strict personal hygiene among food handlers. This includes covering wounds, wearing clean uniforms, and washing hands properly.

The second step is proper storage of foods. Perishable items should be refrigerated promptly to prevent bacterial growth.

The third step is cooking foods thoroughly to destroy staphylococcal bacteria. However, since toxins may resist heat, prevention before toxin formation is essential.

The fourth step is avoiding cross-contamination by using separate utensils and surfaces for raw and cooked foods. This reduces the spread of bacteria from contaminated raw foods to ready-to-eat foods.

### **5. Describe briefly five items which should be included in a standard recipe.**

The name of the dish is the first item. It identifies the recipe and avoids confusion with other dishes.

The list of ingredients is another important item. Each ingredient should be listed with the exact quantity to ensure consistency in preparation.

The method of preparation provides step-by-step instructions for cooking the dish, ensuring uniform results.

The portion size is also included. This helps in standardizing serving sizes and managing food cost control.

The yield, or the number of servings the recipe produces, is important for planning, budgeting, and avoiding waste.

### **6. Explain seven problems facing the catering industry in developing countries.**

One problem is poor infrastructure, including unreliable electricity and water supply, which affects food storage and preparation.

A second problem is shortage of skilled personnel. Many catering workers lack training in hygiene, nutrition, and customer service.

A third problem is high operating costs. Rising food prices, fuel costs, and rent make it difficult for catering businesses to remain profitable.

A fourth problem is weak enforcement of health and safety standards. This allows some establishments to operate under poor sanitary conditions.

A fifth problem is limited access to modern equipment. Many catering establishments still rely on outdated tools, which reduces efficiency.

A sixth problem is stiff competition from informal street vendors, who often sell cheaper food without meeting safety standards.

A seventh problem is seasonality of demand, especially in areas dependent on tourism, where business drops significantly during off-peak seasons.

## **SECTION B**

### **7. Analyse six practical solutions to nutrition problems in developing countries.**

One solution is promotion of exclusive breastfeeding during the first six months, which protects infants from malnutrition and infections.

A second solution is micronutrient fortification of staple foods, such as adding iodine to salt or vitamin A to cooking oil. This helps address hidden hunger.

A third solution is school feeding programmes, which provide balanced meals to children and improve both nutrition and school attendance.

A fourth solution is nutrition education campaigns to raise awareness about balanced diets, food hygiene, and healthy lifestyles.

A fifth solution is strengthening agriculture by supporting smallholder farmers to produce diverse crops that improve dietary variety.

A sixth solution is establishing safety nets and food aid programmes for vulnerable groups like orphans, refugees, and the elderly.

**8. Elaborate six nutrition education approaches suitable for delivering nutrition education to people in rural communities.**

One approach is community meetings, where leaders and health workers share information with large groups in simple language.

Another approach is demonstration, where people are shown how to prepare nutritious meals using local ingredients.

A third approach is home visits, where health workers provide personalized advice to families in their homes.

A fourth approach is use of posters and leaflets with illustrations, which are effective in areas with low literacy levels.

A fifth approach is peer education, where trained community members teach others, ensuring cultural relevance.

A sixth approach is radio programmes, which can reach large rural populations, especially in remote areas where other methods may be difficult.

**9. Describe six health practices that mothers of undernourished children should adopt when provided with nutrition education.**

One practice is exclusive breastfeeding for infants below six months to ensure adequate nutrition and protection from disease.

A second practice is timely introduction of complementary feeding with nutrient-dense foods after six months.

A third practice is maintaining good hygiene by washing hands before preparing food and after using the toilet.

A fourth practice is seeking timely medical care when children fall ill, since illnesses like diarrhea worsen malnutrition.

A fifth practice is ensuring regular deworming and immunization to reduce disease burden in children.

A sixth practice is encouraging frequent feeding, including snacks, to provide enough energy for growth and recovery.

**10. Identify six important factors for successful community nutrition programmes in Tanzania.**

One factor is active community involvement to ensure programmes are accepted and sustained.

A second factor is adequate funding to support activities, purchase resources, and pay personnel.

A third factor is trained and motivated staff who can effectively deliver nutrition interventions.

A fourth factor is cultural sensitivity, ensuring that programmes respect traditions and beliefs.

A fifth factor is strong political and government support to integrate nutrition into national development plans.

A sixth factor is proper monitoring and evaluation to measure progress and make necessary adjustments.