

**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 : 2001**

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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 problems facing the catering industry in Tanzania.**

One problem is inadequate infrastructure. Many catering businesses operate in environments with poor electricity, unreliable water supply, and limited storage facilities, which reduces service efficiency and food safety.

Another problem is lack of skilled personnel. Many catering establishments employ workers with limited training in food preparation, hygiene, and customer care, leading to poor service quality.

A third problem is high operating costs. Rising prices of food ingredients, fuel, and rent increase the cost of catering services, making it difficult to remain competitive.

A fourth problem is stiff competition. The catering industry faces growing competition from both formal and informal food vendors, reducing profit margins for businesses.

A fifth problem is weak regulatory enforcement. Poor monitoring by health and safety authorities allows some businesses to ignore standards, which compromises consumer trust and fair competition.

### **2. Define the term “standard recipe” and mention five items that should be included in it.**

A standard recipe is a set of written instructions detailing the exact quantity of ingredients, method of preparation, portion size, and yield of a particular dish to ensure consistency in food production.

One item to be included is the name of the dish, which identifies what the recipe produces.

A second item is the list of ingredients with precise quantities to avoid variation.

A third item is the method or procedure, giving step-by-step preparation and cooking instructions.

A fourth item is the portion size, which ensures uniformity in serving and cost control.

A fifth item is the yield or number of servings, which helps in planning food production and purchasing.

### **3. Explain five reasons for practicing personal hygiene when handling food in the kitchen.**

One reason is to prevent contamination. Good personal hygiene reduces the risk of introducing harmful microorganisms into food.

A second reason is to protect consumer health. Safe handling practices lower the chances of foodborne illnesses.

A third reason is to improve food quality. Hygienic handling prevents spoilage, thus maintaining flavor, appearance, and freshness.

A fourth reason is to build customer confidence. Consumers trust food establishments where staff observe high standards of cleanliness.

A fifth reason is to comply with regulations. Following hygiene practices helps catering establishments meet government health and safety requirements.

### **4. State six features of successful nutrition intervention programmes.**

One feature is community involvement. Programmes succeed when local people participate in planning and implementation.

A second feature is sustainability. Interventions must continue benefiting people even after external support ends.

A third feature is cultural relevance. Programmes should respect community traditions and food preferences.

A fourth feature is measurable goals. Clear objectives and indicators allow progress tracking and improvement.

A fifth feature is inter-sectoral collaboration. Nutrition involves agriculture, health, and education, so coordination is necessary.

A sixth feature is adequate resource allocation. Availability of funds, skilled staff, and facilities ensures effectiveness.

**5. Identify two groups of menu and three common types of restaurant menus used to attract customers.**

Two groups of menu are table d'hôte menus and à la carte menus. Table d'hôte menus offer a set number of courses at a fixed price, while à la carte menus allow customers to select individual items separately, each priced independently.

Three common types of restaurant menus include cycle menus, which rotate dishes over a set period; specialty menus, which focus on specific cuisines or dishes such as seafood or vegetarian; and static menus, which remain unchanged over a long period and are commonly used in fast-food restaurants.

**6. Describe four steps used to limit the incidence of staphylococcal enterotoxin in foods.**

The first step is proper personal hygiene. Food handlers must wash hands, wear clean clothing, and cover wounds to prevent bacteria from contaminating food.

The second step is temperature control. Cooked foods should be kept hot above 60°C or cold below 5°C to prevent bacterial growth and toxin production.

The third step is proper storage and handling. Perishable foods should be refrigerated promptly, and cross-contamination between raw and cooked foods must be avoided.

The fourth step is thorough cooking. Adequate heat destroys staphylococcal bacteria, though toxins may persist, so prevention of growth before toxin formation is critical.

**SECTION B**

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

One solution is promoting exclusive breastfeeding for the first six months to prevent malnutrition and infections in infants.

A second solution is fortification of staple foods with essential nutrients such as iodine, vitamin A, and iron to combat micronutrient deficiencies.

A third solution is community nutrition education to improve knowledge on balanced diets, food hygiene, and child feeding practices.

A fourth solution is supporting small-scale agriculture and kitchen gardens to increase household food production and dietary diversity.

A fifth solution is implementing supplementary feeding programmes for vulnerable groups such as under-five children and pregnant women.

A sixth solution is strengthening health services to provide treatment for diseases that worsen malnutrition, such as diarrhea and malaria.

### **8. Elaborate six techniques of promotion used in catering establishments.**

One technique is advertising through newspapers, radio, or social media to create awareness and attract customers.

A second technique is sales promotions such as discounts, coupons, or special offers to encourage customers to try meals.

A third technique is personal selling, where staff interact directly with customers to recommend dishes and build loyalty.

A fourth technique is public relations, including participation in community events or charity work to build a positive image.

A fifth technique is use of attractive menus and displays to stimulate appetite and interest.

A sixth technique is offering loyalty programmes or membership cards that reward repeat customers.

### **9. Explain the role of the Ministry of Trade and Industry in ensuring the success of the Food and Nutrition Policy for Tanzania, giving five points.**

One role is regulation of food industries to ensure compliance with safety and nutrition standards.

A second role is promoting agro-processing industries to increase availability of fortified and diverse foods.

A third role is enforcing labeling and packaging laws to provide consumers with accurate nutritional information.

A fourth role is facilitating trade policies that support import and export of safe and nutritious food products.

A fifth role is supporting small and medium enterprises in food production, thereby increasing access to affordable foods in communities.

**10. Support the statement, “Requirements for growth of microorganisms are identical regardless of whether they are harmful or beneficial,” by classifying microorganisms important in food microbiology and describing four extrinsic factors that influence their growth.**

Microorganisms in food microbiology can be classified into bacteria, yeasts, and molds. Bacteria include both harmful types like *Salmonella* and beneficial types like *Lactobacillus*. Yeasts may cause spoilage, but some are useful in fermentation, such as *Saccharomyces cerevisiae*. Molds can produce toxins but are also used in food processing, such as in cheese production.

Extrinsic factors influencing growth include temperature, where cooler temperatures slow growth and higher temperatures may encourage rapid multiplication.

A second factor is relative humidity, as high humidity favors microbial growth while low humidity limits it.

A third factor is the presence or absence of oxygen, since some microbes require oxygen (aerobes) while others grow without it (anaerobes).

A fourth factor is the surrounding environment, including packaging and storage conditions, which can either enhance or restrict microbial activity.