

**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 : 2005

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).

maktaba.tetea.org



SECTION A

1. Mention four objectives of nutrition education programmes and two types of information under each component.

The first objective is to improve knowledge about nutrition. Information under this includes nutrient functions and sources of different foods.

The second objective is to promote healthy eating practices. Information under this includes dietary guidelines and portion sizes.

The third objective is to prevent nutrition-related diseases. Information under this includes risks of poor diets and preventive strategies.

The fourth objective is to improve food utilization at household level. Information under this includes hygienic food handling and proper storage methods.

2. Describe six conditions that favour microbial growth in food.

One condition is temperature, especially between 5°C and 60°C, which supports rapid microbial multiplication.

A second condition is moisture, as bacteria and molds thrive in foods with high water activity like milk and meat.

A third condition is pH level, with neutral or slightly acidic foods being more prone to microbial growth.

A fourth condition is oxygen availability, since some microbes require oxygen while others grow without it.

A fifth condition is nutrient availability, as foods rich in proteins, carbohydrates, and fats encourage microbial metabolism.

A sixth condition is time, because the longer food stays in favorable conditions, the more microorganisms multiply.

3. State the importance of practicing good personal hygiene in food preparation areas.

Good personal hygiene prevents contamination of food with harmful microorganisms from the handler's body.

It also reduces the risk of foodborne illnesses among consumers by ensuring food safety.

Maintaining hygiene builds customer trust in catering services and improves business reputation.

It ensures compliance with health and safety regulations, protecting businesses from penalties and closure.

4. Identify six indicators of protein-energy malnutrition and suggest four measures to control it.

Indicators include severe wasting of muscles, swelling of the body (edema), stunted growth, dry and thin hair, loss of subcutaneous fat, and delayed developmental milestones.

Control measures include exclusive breastfeeding for the first six months of life, timely introduction of complementary feeding, nutrition education for caregivers, and improving household food security through farming and support programmes.

5. Define food quality assurance systems and outline five activities involved in quality assurance.

Food quality assurance systems are organized measures and procedures designed to ensure that food products consistently meet established standards of safety, nutrition, and quality.

Activities include inspection of raw materials and finished products, laboratory analysis of food samples, certification and labeling of safe foods, training food handlers on safety practices, and continuous monitoring of food industries to maintain compliance.

6. List five features of successful nutrition intervention programmes.

One feature is community participation, which ensures acceptance and sustainability.

A second feature is measurable goals, which help to monitor progress effectively.

A third feature is adequate resource allocation, including funds, staff, and materials.

A fourth feature is cultural appropriateness, making programmes relevant to local traditions.

A fifth feature is multi-sectoral collaboration, as nutrition is linked with health, agriculture, and education.

SECTION B

7. Discuss the causes of undernutrition among children under five years, giving examples of immediate, underlying and basic causes.

Immediate causes include inadequate dietary intake due to poor feeding practices and frequent diseases such as diarrhea, malaria, and respiratory infections, which reduce nutrient absorption.

Underlying causes include household food insecurity, poor maternal and childcare practices, and lack of access to health services and safe water.

Basic causes include poverty, political instability, weak health systems, and cultural practices that limit children's access to adequate nutrition.

8. “Catering services are essential in tourism development.” Explain five criteria for establishing catering services and discuss four challenges facing the industry.

Criteria include location in areas accessible to tourists, availability of reliable water and electricity, trained staff with catering skills, compliance with hygiene and safety regulations, and adequate capital for quality service delivery.

Challenges include high operational costs due to rising food and utility prices, competition from informal vendors, shortage of skilled personnel, and seasonal demand fluctuations in tourism areas.

9. Support the statement “Breastfeeding is the best practice for feeding infants” by suggesting six measures to control infant formula promotion and three alternatives for working mothers.

Measures to control formula promotion include banning advertisements that equate formula with breast milk, prohibiting free distribution of samples, requiring health workers to promote breastfeeding, regulating packaging to display breastfeeding messages, enforcing penalties against companies violating codes, and monitoring marketing practices regularly.

Alternatives for working mothers include expressing and storing breast milk for later feeding, negotiating flexible work schedules or breastfeeding breaks, and arranging for caregivers or family members to feed expressed milk during working hours.

10. Describe six promotion techniques used in catering establishments.

One technique is advertising through media outlets to reach wide audiences.

Another technique is sales promotions such as discounts and special offers to attract new customers.

A third technique is personal selling, where staff recommend dishes directly to customers.

A fourth technique is loyalty programmes that reward regular customers.

A fifth technique is use of attractive menus and food displays to increase customer appetite.

A sixth technique is public relations, such as engaging in community events, to create a positive business image.