

**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 : 2015

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



1. Describe eight features of successful nutrition intervention programmes.

A successful nutrition intervention programme begins with clear objectives and goals. These objectives guide the programme design and ensure that interventions target specific nutritional problems within the community. Clear goals allow monitoring and evaluation of progress over time.

Another feature is community participation. Involving local people in planning, implementing, and evaluating the programme ensures that interventions are culturally acceptable, practical, and more likely to be sustained.

Evidence-based approaches are essential. Using reliable data and research findings to inform interventions increases the effectiveness of the programme and ensures that resources are used efficiently.

Adequate funding and resources are critical. Without sufficient financial, human, and material resources, programmes cannot reach intended populations or maintain activities for a meaningful duration.

Capacity building and training of staff and volunteers are important. Well-trained personnel are better equipped to deliver nutrition education, manage food programmes, and provide proper monitoring and evaluation.

Multisectoral collaboration enhances programme success. Nutrition interventions often require cooperation between health, agriculture, education, and social services to address complex factors contributing to malnutrition.

Monitoring and evaluation mechanisms allow tracking of progress, identification of challenges, and timely corrective measures. This ensures accountability and continuous improvement in programme delivery.

Lastly, sustainability and scalability are key features. Programmes should be designed to continue after initial funding ends and be adaptable for implementation in other communities with similar needs.

2. Explain seven causes of undernutrition in under-five children using a conceptual framework.

One immediate cause is inadequate dietary intake, where children do not receive enough calories or essential nutrients for growth and development.

Another immediate cause is disease, including diarrhea, respiratory infections, and malaria, which reduce nutrient absorption and increase nutrient requirements.

At the underlying level, household food insecurity prevents families from consistently accessing sufficient and nutritious food.

Inadequate maternal and child care practices contribute to undernutrition, such as inappropriate breastfeeding, poor complementary feeding, and lack of attention to hygiene.

Poor water, sanitation, and hygiene (WASH) increase the risk of infections, exacerbating nutritional deficiencies.

At the basic level, poverty and low household income limit access to food, healthcare, and education, perpetuating malnutrition cycles.

Lack of education and awareness, particularly among caregivers, prevents adoption of optimal feeding, hygiene, and healthcare practices necessary to prevent undernutrition.

3. Define nutrition education and discuss its three major components.

Nutrition education is a process of providing information and guidance to individuals or communities to improve dietary habits and nutritional status. It aims to empower people to make informed food choices and adopt healthier behaviors.

The first component is knowledge dissemination, which involves providing accurate and understandable information about nutrients, dietary requirements, and food safety. This forms the foundation for behavior change.

The second component is skills development, which equips individuals with practical abilities such as meal planning, food preparation, proper storage, and portion control. Skills ensure that knowledge is applied effectively.

The third component is behavior change support, which involves counseling, follow-up, and reinforcement strategies to help individuals adopt and maintain healthy dietary practices over time.

4. Give two criteria for establishing a catering service and explain challenges facing catering services in Tanzania.

One criterion is location suitability. A catering service should be located in an accessible area with adequate infrastructure, such as roads, electricity, and water supply, to facilitate operations and attract customers.

Another criterion is market demand and target clientele. Assessing potential customers and understanding their preferences ensures that the service can provide appealing menus and competitive pricing.

Challenges facing catering services in Tanzania include high operational costs, such as rent, utilities, and raw materials, which reduce profitability.

Another challenge is shortage of skilled personnel, which affects food quality and service delivery.

Poor supply chain reliability can disrupt ingredient availability and affect menu planning.

Regulatory compliance with health, safety, and licensing requirements can be complex and costly for small businesses.

Competition and market saturation make it difficult for new catering businesses to attract customers and maintain consistent revenue.

5. Explain six health practices that should be addressed when educating mothers of undernourished children.

The first practice is exclusive breastfeeding for the first six months. Educating mothers about this ensures infants receive adequate nutrition and immunity during a critical growth period.

Second, timely introduction of appropriate complementary foods is important. Mothers should learn how to introduce nutrient-rich foods at six months while continuing breastfeeding.

Third, handwashing and personal hygiene prevents infections that contribute to malnutrition, such as diarrhea and respiratory illnesses.

Fourth, safe food storage and preparation reduces contamination and ensures the nutritional quality of foods given to children.

Fifth, regular health check-ups and immunization help detect and prevent diseases that exacerbate undernutrition.

Sixth, adequate fluid intake ensures children remain hydrated and supports proper digestion and nutrient absorption.

6. Identify six indicators and four control measures of Marasmus.

Indicators of Marasmus include severe weight loss, muscle wasting, thin limbs, loss of subcutaneous fat, prominent ribs and bones, and stunted growth. These signs reflect chronic energy deficiency and malnutrition in affected children.

Control measures involve providing therapeutic feeding with energy-dense and nutrient-rich foods, monitoring and managing infections to prevent further nutrient depletion, ensuring safe water and hygiene practices to avoid contamination, and nutrition education for caregivers to improve feeding practices and prevent recurrence.

SECTION B (40 Marks)

Answer two questions from this section

7. Describe seven measures to promote breastfeeding and discourage infant formula in developing countries.

One measure is enforcing the International Code of Marketing of Breast-milk Substitutes to prevent aggressive promotion of formula and misleading advertisements.

Second, training healthcare workers on breastfeeding support ensures mothers receive guidance and encouragement rather than being influenced by formula promotions.

Third, educating mothers during antenatal and postnatal care about the benefits of exclusive breastfeeding promotes informed decision-making.

Fourth, restricting free or subsidized distribution of formula in healthcare facilities prevents dependency and unnecessary use.

Fifth, community awareness campaigns highlight the advantages of breastfeeding and risks of formula feeding.

Sixth, supporting workplace policies, such as lactation breaks and designated feeding areas, enables mothers to continue breastfeeding after returning to work.

Seventh, monitoring and reporting violations by formula companies ensures accountability and reinforces breastfeeding promotion.

8. State five dietary assessment methods and how they help to determine nutritional status.

The 24-hour dietary recall captures all foods consumed in the previous day, providing insight into recent nutrient intake.

The food frequency questionnaire (FFQ) assesses how often foods or food groups are consumed, revealing habitual dietary patterns and potential deficiencies.

Direct observation monitors actual food consumption and handling practices, reducing reliance on self-reported information.

Dietary history interviews explore long-term eating habits, seasonal variations, and cultural practices that influence nutrition.

Anthropometric measurements, such as weight, height, and mid-upper arm circumference, indirectly reflect nutritional status by indicating undernutrition, stunting, or overweight prevalence.

9. Analyze the role of food quality assurance systems in maintaining safe food standards.

Food quality assurance systems establish procedures and standards to ensure that food products are safe, consistent, and meet regulatory requirements. These systems monitor each stage of production, from raw material sourcing to storage, preparation, and service.

They reduce contamination risks by implementing hygiene practices, temperature controls, and safety protocols. This protects consumers from foodborne illnesses and builds trust in the food service industry.

Quality assurance systems also enable regulatory compliance, helping businesses adhere to national and international food safety standards, which is essential for both domestic and export markets.

Additionally, these systems facilitate continuous improvement by tracking performance, identifying deficiencies, and implementing corrective measures to maintain high-quality standards over time.

10. Discuss six promotion techniques used in the catering industry.

One promotion technique is advertising through media, including newspapers, radio, television, and social media, to reach a wide audience and create awareness of services.

Second, special offers and discounts attract customers and encourage trial of the service.

Third, loyalty programs reward repeat customers, fostering long-term relationships and customer retention.

Fourth, participation in food fairs and exhibitions showcases the catering service to potential clients and allows demonstration of food quality and presentation skills.

Fifth, direct marketing, such as distributing flyers or emails to target customers, informs them of services and upcoming events.

Sixth, collaboration with event planners and corporate clients helps secure large contracts and enhances visibility through referrals and partnerships.