

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

155/2

FOOD AND HUMAN NUTRITION 2

(For Both School and Private Candidates)

Time: 3 Hours

ANSWERS

Year: 2020

Instructions

1. This paper consists of sections **A** and **B**.
2. Answer **all** questions in section **A** and only **Three (3)** questions from section **B**.
3. Cellular phones and any unauthorised materials are **not** allowed in the examination room.
4. Write your **examination Number** on every page of your answer booklet(s).

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1. Explain why dietary surveys may provide inaccurate information used for the assessment of nutritional status of a community by giving five (5) points.

One reason is recall bias, where respondents may forget or inaccurately report the types and amounts of food they consumed, leading to unreliable data.

Another issue is deliberate misreporting, where individuals may underreport consumption of foods considered unhealthy or overreport healthy food intake to appear socially acceptable.

Seasonal variations in food availability can affect the accuracy of dietary surveys because certain foods may not be available year-round, causing inconsistencies in reported diets.

The complexity of estimating portion sizes accurately makes it difficult for participants to recall and report exact amounts consumed, resulting in incorrect nutrient intake calculations.

Lastly, differences in literacy levels and understanding of survey questions among respondents can lead to misinterpretation and inaccurate responses, affecting the reliability of the data.

2. (a) Identify four (4) objectives of nutrition education programs.

One objective is to increase public awareness about the importance of proper nutrition and its role in health.

Another is to promote the adoption of healthy eating habits and discourage harmful dietary practices.

Nutrition education aims to prevent nutrition-related diseases by informing communities about risk factors and healthy lifestyles.

It also seeks to improve the nutritional status of vulnerable groups such as children, pregnant women, and the elderly.

- (b) Identify three (3) components of nutrition programs and give two (2) types of information to be provided in each component.

The first component is nutrition education, which provides information on balanced diets and the importance of exclusive breastfeeding.

The second component is food supplementation, offering details about target groups for supplements and recommended types of food or nutrients to be provided.

The third component is food fortification, which involves sharing information about the benefits of fortified foods and the essential nutrients added to common food products.

3. (a) Give two (2) criteria for establishing a catering service.

One criterion is the availability of a reliable market or customer base to sustain the business.

Another is access to clean water, electricity, and hygienic facilities to support safe food preparation and service.

- (b) State eight (8) problems facing catering industry in our country.

Inadequate trained personnel result in poor food quality and service delivery.

Limited access to modern kitchen equipment affects efficiency and food safety.

High cost of quality ingredients makes it difficult for caterers to maintain consistent standards.

Frequent power shortages disrupt food storage and preparation processes.

Unstable prices of food commodities affect budgeting and profitability.

Poor infrastructure, such as bad roads, hinders timely delivery of food supplies.

Lack of proper waste management systems poses environmental and health hazards.

Inconsistent adherence to hygiene and food safety regulations increases the risk of foodborne diseases.

4. (a) Give the importance of practicing good personal hygiene in the kitchen when handling food.

Practicing good personal hygiene prevents the contamination of food with harmful microorganisms, reducing the risk of foodborne illnesses.

It also helps maintain customer confidence and satisfaction by ensuring the food served is safe and clean.

Good hygiene practices improve the overall reputation of a catering business, attracting and retaining customers.

(b) State seven (7) personal hygiene practices that the food handlers should observe in order to provide safe foods to the customers.

Food handlers should wash their hands thoroughly with soap before handling food and after using the toilet.

They should wear clean protective clothing, including aprons and head covers.

Keeping nails short, clean, and free of nail polish is essential.

Food handlers should avoid handling food when ill to prevent contamination.

They must keep hair neatly tied or covered to prevent hair from falling into food.

Avoid wearing jewelry while handling food to prevent physical contamination.

Maintaining overall personal cleanliness, including regular bathing, is important.

5. (a) Differentiate active immunization from passive immunization.

Active immunization involves stimulating the body's immune system to produce its own antibodies against a disease through vaccines.

Passive immunization is the administration of ready-made antibodies to provide immediate but temporary protection against a disease.

(b) Explain two (2) advantages of passive immunization.

It provides immediate protection, which is crucial in emergencies such as exposure to rabies or tetanus.

Passive immunization is useful for individuals who cannot develop their own immune response due to medical conditions.

(c) Identify four (4) benefits of vaccines.

Vaccines protect individuals from serious and potentially life-threatening diseases.

They help prevent the spread of infectious diseases within communities through herd immunity.

Vaccination reduces healthcare costs by lowering the incidence of disease and related treatment expenses.

Vaccines contribute to increased life expectancy and improved quality of life by preventing disabling illnesses.

6. Explain five (5) conditions which support growth and multiplication of bacteria.

Warm temperatures, particularly between 20°C and 45°C, favor rapid bacterial growth.

Moist environments provide the necessary water activity that bacteria require for survival and multiplication.

Neutral or slightly acidic pH levels, usually between 6.5 and 7.5, create a suitable environment for most bacteria.

Availability of nutrients such as proteins, carbohydrates, and vitamins supports bacterial growth.

Presence of oxygen, for aerobic bacteria, or absence of it, for anaerobic bacteria, depending on the type of microorganism, influences their growth and multiplication.

7. Explain seven (7) causes of undernutrition to expectant women and suggest two (2) strategies to overcome micronutrient deficiencies to expectant women in the society.

One cause is inadequate food intake, where pregnant women consume insufficient quantities of nutritious food due to poverty, food insecurity, or poor dietary habits. This limits the supply of essential nutrients required for both mother and baby.

Another cause is increased nutrient requirements during pregnancy. The body's demand for calories, proteins, iron, calcium, and other micronutrients rises, and failure to meet these increased needs results in undernutrition.

Frequent infections and illnesses such as malaria, intestinal worms, or HIV/AIDS contribute to nutrient loss and poor absorption, worsening the nutritional status of expectant women.

Poor access to antenatal care services denies many pregnant women the opportunity to receive nutrition counseling, supplements, and health check-ups essential for a healthy pregnancy.

Cultural beliefs and taboos that restrict certain nutritious foods during pregnancy limit the diversity and quality of the diet, contributing to nutrient deficiencies.

Heavy workloads and physical labor undertaken by expectant women increase energy expenditure without corresponding increases in food intake, causing undernutrition.

Low levels of education and limited knowledge about nutrition and health practices result in poor dietary choices and delayed medical care during pregnancy.

Two strategies to overcome micronutrient deficiencies include distributing iron, folic acid, and other essential supplements to expectant women through antenatal clinics. Another strategy is conducting community-based nutrition education programs to raise awareness about the importance of a balanced, micronutrient-rich diet and the benefits of timely healthcare services.

8. Describe six (6) techniques of promotion used in catering establishments.

Advertising is one technique, where businesses use posters, radio, television, and social media to inform the public about their services and special offers.

Personal selling involves direct communication between staff and customers, providing personalized service and encouraging repeat visits.

Sales promotions such as discounts, coupons, and special event packages attract new customers and retain existing ones.

Public relations activities, including sponsoring community events or participating in charity work, help build a positive image and goodwill.

Point-of-sale displays and attractive menu boards inside the establishment capture customer attention and influence purchase decisions.

Offering loyalty programs or reward schemes encourages customers to return frequently by providing incentives like free meals or discounts after a certain number of visits.

9. Explain nine (9) nutrition education approaches used to deliver nutrition education to the people in developing countries.

The community outreach approach involves health workers and volunteers visiting homes and villages to provide nutrition advice, distribute supplements, and promote healthy practices.

Group discussions and seminars gather community members to share experiences, discuss nutrition topics, and learn from facilitators in a participatory environment.

Use of posters, leaflets, and visual aids helps convey simple nutrition messages through images and symbols, especially in areas with low literacy levels.

Radio programs and community announcements are used to broadcast nutrition messages to reach large, dispersed populations in rural areas.

School-based nutrition education introduces students to healthy eating habits and personal hygiene, with the expectation that they will share this knowledge at home.

Cooking demonstrations teach caregivers practical skills in preparing balanced meals using locally available and affordable ingredients.

Drama, songs, and folk media creatively pass on nutrition messages in a culturally acceptable and entertaining way that captures attention and enhances retention.

Incorporating nutrition education into routine antenatal and postnatal services ensures that expectant and nursing mothers receive important dietary guidance during critical periods.

Training community leaders and religious figures to promote nutrition messages ensures that respected figures within society advocate for healthy practices, increasing acceptance and adherence.