

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

155/1

FOOD AND HUMAN NUTRITION 1

(For Both School and Private Candidates)

Time : 3 Hours

Year : 2000

Instructions

1. This paper consists of sections **A** and **B**.
2. Answer all questions in section **A** and only **three (3)** 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 (40 Marks)

Answer all questions in this section. Each question carries eight (8) marks.

1. (a) Differentiate between chronic food insecurity and transitory food insecurity.
(b) Analyse the effects of the following on food production in Tanzania:
 - (i) Rapid population growth
 - (ii) Civil conflicts
 - (iii) HIV/AIDS
 - (iv) Environmental degradation
2. (a) Briefly describe three temporary methods of storing food grains used by Tanzanian villagers.
(b) State four disadvantages of using underground storage methods.
(c) Suggest three modern methods that can improve traditional grain storage.
3. (a) Identify three groups of foods that enhance the absorption of iron in the human body.
(b) Explain two groups of foods that hinder the absorption of iron.
4. (a) Define Basal Metabolic Rate (BMR).
(b) Explain four factors which affect the Basal Metabolic Rate of an individual.
(c) Briefly state three reasons why BMR is higher in infants than in adults.
5. (a) Describe the importance of each of the following in bread making:
 - (i) wheat flour
 - (ii) fresh yeast
 - (iii) warm liquid
 - (iv) table salt
(b) State two determinants of the choice of a raising agent to be used and give one example of a product and the raising agent used.
(c) Explain what will happen if a filler material is not added to baking powder.

SECTION B (60 Marks)

Answer any three (3) questions from this section. Each question carries twenty (20) marks.

6. Food fortification is an important practice to improve micronutrient intake. Discuss the benefits of fortification and explain the necessary conditions for its success.
7. Describe six natural compounds used to protect food grains against pest infestation and explain how they act on pests.
8. Explain traditional methods of storing food grains in Tanzania and assess their effectiveness in minimizing losses during storage.
9. A diabetic patient has been referred to you for nutritional counseling. Recommend appropriate dietary practices and lifestyle adjustments that can help in managing the illness.
10. "Handling procedures in food processing convert food into consumable form." Discuss this statement with reference to stages of food processing and the effects of drying on food grains.