

**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: 2003

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 from this section.

1. (a) Define Basal Metabolic Rate.
(b) Explain four factors affecting BMR.
(c) Why is BMR higher in infants than adults?
2. (a) State the importance of the following in bread making:
 - (i) Wheat flour
 - (ii) Yeast
 - (iii) Warm liquid
 - (iv) Salt.
(b) What happens if a filler material is not included in baking powder?
3. (a) Identify three groups of foods that enhance iron absorption.
(b) Mention two groups of foods that hinder iron absorption.
(c) Explain briefly how vitamin C influences iron absorption.
4. (a) Define food security.
(b) Mention three household requirements for food security.
(c) Analyse three factors that reduce food security in Tanzania.
5. (a) Differentiate between food quality and food safety.
(b) Explain the purpose of food quality assurance programmes.
(c) State three challenges in implementing food quality assurance in Tanzania.

SECTION B (60 Marks)

Answer any three questions from this section.

6. Discuss the significance of sugar and starch in human nutrition.
7. Describe natural compounds used to protect food grains against pests and their effects.
8. Explain traditional methods of storing grains in Tanzania and evaluate their effectiveness.
9. “Post-harvest losses threaten food availability in developing countries.” Discuss six major causes of these losses.

10. Explain the three stages of food processing and describe how drying affects food grain quality.