

**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 : 2007

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 essential amino acids.
(b) List any five essential amino acids.
(c) Explain two effects of essential amino acid deficiency in the body.
2. (a) Differentiate between saturated fatty acids and polyunsaturated fatty acids.
(b) State two health risks associated with excess intake of saturated fatty acids.
(c) Mention three dietary sources of polyunsaturated fatty acids.
(d) Explain the importance of omega-3 fatty acids in human nutrition.
3. (a) Define basal metabolic rate (BMR).
(b) Mention three factors that influence BMR.
(c) State three reasons why BMR is higher in men than in women.
4. (a) What is anemia?
(b) Give three nutritional causes of anemia.
(c) Mention three groups of people who are more vulnerable to anemia.
(d) State three measures to prevent anemia in the community.
5. (a) Define food poisoning.
(b) State three bacterial causes of food poisoning.
(c) Mention two symptoms of food poisoning.
(d) Outline three ways of preventing food poisoning at household level.

SECTION B (60 Marks)

Answer only three questions from this section.

6. Analyse the relationship between poor sanitation and malnutrition in developing countries.
7. Discuss the contribution of biotechnology in improving food and nutrition security.

8. Explain the effects of overnutrition on health and productivity in Tanzania.
9. Assess the role of school feeding programs in promoting learning and nutrition among pupils.
10. Discuss the effects of HIV/AIDS on food production and nutrition at household level.