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

034/2

AGRICULTURE 2
(ACTUAL PRACTICAL)
(For Both School and Private Candidates)

Duration: 2:30 Hours **Year: 2025**

Instructions

1. This paper consists of **two (2)** questions.
2. Answer **all** questions.
3. Each question carries **twenty five (25)** marks.
4. All writing must be in **blue** or **black** ink, except drawings which must be in pencil.
5. Communication devices and any unauthorised materials are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

1. (a) You are provided with the specimen **P**. Perform the following procedures and answer the questions that follow:

Procedures

(i) Pour 3 cm^3 of specimen **P** in a test tube and boil it thoroughly.

(ii) Cool the specimen on water bath.

(iii) Add 3 drops of iodine solution and observe the results.

Questions

(i) What is the aim of this experiment? **(1.5 marks)**

(ii) What have you observed in the experiment? **(1 mark)**

(iii) Give comment on the results obtained in part (ii). **(1 mark)**

(b) You are provided with specimen **Z** and polished vertical slanted surface of a wooden block. Design and carry out a simple experiment to test for the presence of adulterant in the specimen and write a report on the experiment. **(7.5 marks)**

(c) (i) From the experiments in part (a) and (b), which specimen would you recommend for consumption? Give a reason. **(2 marks)**

(ii) Give six advantages of consuming the specimen you have recommended in part (c) (i). **(6 marks)**

(d) Briefly explain four effects of consuming the specimen that you have not recommended in part (c) (i). **(6 marks)**

2. You are provided with 150 g of specimen **J**, 150 g of specimen **K**, 150 g of specimen **L**, 3 filter papers, 3 measuring cylinders (250 cm^3), 3 filter funnels, 1 beaker (250 cm^3), source of water and wall clock. Perform the following procedures and answer the questions that follow:

Procedures

(i) Place filter papers in the three filter funnels labeled **J**, **K** and **L**.

(ii) Put 150 g of specimen **J** in a filter funnel **J**, 150 g of specimen **K** in a filter funnel **K** and 150 g of specimen **L** in a filter funnel **L**. Place each of the filter funnels in a 250 cm^3 measuring cylinder provided.

(iii) Measure 100 cm^3 of water in a beaker.

(iv) Pour the water from the beaker into the filter funnel **J**.

(v) After five minutes, remove the filter funnel and note the volume of water collected in the measuring cylinder.

(vi) Repeat steps (iii), (iv) and (v) with filter funnels containing specimens **K** and **L**.

Questions

(a) Giving two reasons, comment on the suitability of each of the specimens **J**, **K** and **L** for the crop production. **(7.5 marks)**

(b) Based on your observation in the experiment, suggest the possible textural class for each of the specimens **J**, **K** and **L**. **(1.5 marks)**

(c) Apart from soil characteristics observed during the experiment, what other good characteristics of specimen **J**, **K** and **L** are suitable for crop production? Give two points for each. **(6 marks)**

(d) How would you improve one of the specimen you have pointed in part (a) to be less suitable for crop production? Give eight points. **(8 marks)**

(e) Give a reason for slowest drainage observed in one of the specimens during the experiments. **(2 marks)**