THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

ADVANCED CERTIFICATE OF SECONDARY EDUCATION

EXAMINATION

134/3 **AGRICULTURE 3**

(For Both School and Private candidates)

Time: 3 Hours **Year: 2022**

Instructions

1. This paper consists of **three (3)** questions..
2. Answer **two (2)** questions.
3. Question **one (1)** carries **twenty (20)** marks and question two (2) and three(3) carry **fifteen (15)** marks each.
4. Non-programmable calculators may be used.
5. Write your **Examination Number** on every page of your answer booklet (s)

1. You are provided with the following specimens: C_1 , C_2, and C_3 .Carefully observe them and answer the questions that follow.
   (a) State three observable abnormalities for specimen C_1 and one abnormality for specimen C_2
   (b) Identify the carriers of the pathological agents responsible for the observed abnormalities in specimen C_1 and C_2
   (c) Give six ways in which abnormalities identified in specimen C_1 can be controlled
   (d) state two ways of combating the situation observed in specimen C_2
   (e) give five general symptoms of abnormalities caused by the identified pathological agent in specimen C_1 and C_2
   (f) account for four effects of the abnormalities identified in specimen C_1 and C_2 if the farmer does not take the preventive measures.
2. You are provided with the following specimens, equipment, apparatuses and materials: **M,** soil, Pyrex beaker (100 cm^3), weighing balance, wall clock, stirring rod, source of heat, wire gauze and tripod stand. Perform the procedures hereafter and then answer questions that follow:
   (i) Weigh a beaker.
   (ii) Weigh 50 g of specimen **M** and put it in a beaker.
   (iii) Place a beaker containing specimen M on top of wire gauze on a source of heat.
   (iv) Heat specimen **M** for 15 minutes while stirring and carefully make observations on what is happening during the heating.
   (v) Remove the beaker from the source of heat and let it cool for 15 minutes.
   (vi) Re-weigh the beaker containing specimen **M** after cooling.

   Questions

   (a) Record the data in the table provided:

Weight of beaker (g) **(X)**	Weight of beaker+ specimen **M** before heating (g) **(Y)**	Weight of beaker+ specimen **M** after heating (g) **(Z)**

(b) state the aim of the experiment

(c) calculate the percentage loss in the weight of sample **M**

(d) give reason for the colour change in the specimen after heating

(e) give six effects of burning specimen **M** during the land preparation.

3. You are provided with the following specimen, apparatuses and materials: specimen **X,** knife/surgical blade, forceps, petri-dish and one pair of disposable hand gloves. Perform the procedures hereafter and answer questions that follow:

(i) Wear hand gloves.

(ii) Take specimen **X** from the watch glass and put it over the petri dish.

(iii) Use knife/surgical blade to cut specimen **X** at the middle longitudinally.

(iv) Empty the content of specimen **X** on the watch glass and carefully observe the content.

(v) Remove the outer layer of the inner part of specimen **X** and make an observation to the remaining layer.

Questions:

(a) Name the observed content emptied on the watch glass.

(b) Give the role of the observed materials in part (a).

(c) Briefly explain two features of the inner part of specimen **X** from the observation made.

(d) Give reason why teeth are not necessary in the organism from which the specimen **X** was taken.

(e) Explain how the food particle reach specimen **X** from the beak,

(f) Enumerate six features which differentiate the digestive system of poultry from that of other farm animals.

(g) Draw the system to which specimen **X** is a part and label ten parts.