CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)
NORTHERN ZONE JOINT EXAMINATIONS SYNDICATE (NZ-JES)

FORM FOUR PRE – NATIONAL EXAMINATION 2025

034/2

AGRICULTURE 2
MARKING SCHEME

1. .(a) You are provided with specimens T_1, T_2,2 Pyrex test tube, tongs, test tube rack, dropper, source of heat and 1% iodine solution. Perform the following procedures and answer the questions that follows.

Procedures:

i) Pour 3mls of specimen T_1 in a test tube and boil it thoroughly.
ii) cool the sample specimen to room temperature.
iii) Add 2 to 3 drops of 1% iodine solution and make observations.
iv) Repeat procedures (i)-(iii) by using the specimen T_2.

Questions

i) What is the aim of the experiment? **(1mark)**
ii) What is your observation after the experiments? **(1mark)**
iii) What is the effect of substance identified in specimen T_2? **(1mark)**
iv) What was the aim of heating during experiment on specimen T_1 and T_2? (**1mark)**
v) Specimen T_1 is affected by several factors. Briefly state six factors which affect the quality of this specimen. **(6marks)**
vi) Production of specimen T_1 may differ from one female animal to another. Briefly explain six factors which cause the situation. **(6marks)**

(b) You are provided with specimen Q. With the aid of hand lens, make careful observations of the observable symptoms of nutrient deficiency

Questions

i) Name a deficiency symptom you have observed on specimen Q. **(1mark)**
ii) Which plant nutrient is associated with the observed symptom? (1mark)
iii) Give four functions of named element in b (ii) above. **(4marks)**
iv) List three effects of excessive supply of nutrient element with observed deficiency symptom to the crop plant. **(3marks)**

2.(A)You are provided with the fertilizer samples D1 and D2. Carefully observe them and perform the given procedures then answer the questions that follow.

Procedures

i) Label two petri-dish D1 and D2
ii) Place the small amounts of specimen D1 and D2 in a labelled petri-dish respectively
iii) Record the colour of each specimen
iv) Record the shape of each specimen
v) Place a small quantity of each specimen D1 and D2, one at a time in a test tube. Add distilled water to make a solution. Record your observation
vi) Place a strip of red and blue litmus paper in the solution made by dissolving the sample specimens in distilled water. Record your observations and find out the P^H of the two sample specimens.

Questions

i. What is the aim of the experiment? **(1mark)**
ii. Give the experimental observations for each of the sample specimen D1 and D2 in step (iii) and **(2marks)**
iii. What have you observed in step (v) of the procedures above? **(1marks)**
iv. Comment on the P^H of the two samples D1 and D2 **(2marks)**
v. Identify sample specimen D1 and D2 **(2marks)**
vi. What is the effect of too much application of specimen D1 especially on cereal crops? **(2marks)**
vii. Give five properties of sample specimen D1. (**5marks)**

(B) you are provided with specimen K and S observe them carefully and answer the question that follows

i. Identify the specimens K and S **(02 Marks)**
ii. State one function of each specimen **(02 marks)**
iii. State three (03) advantages of the practice done by specimen K **(03 Marks)**
iv. Mention three (03) maintenances of specimen K (**03 marks)**