

**THE UNITED REPUBLIC OF TANZANIA
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
DODOMA REGION FORM SIX MOCK EXAMINATIONS**

AGRICULTURE 3- MARKING SCHEME

CODE: 134/3

TIME: 3.00HOURS

November, 2023

INSTRUCTIONS

- a) This paper consists of ten questions
- b) Answer **all** questions
- c) Cellular phones are **not** allowed in the examination room
- d) Write your examination number on every page of your answer booklet

QUESTIONS

1. You are provided with the following; Soil sample, mortar and pestle, soil sieves, weighing balance and textural triangle. Carry out an experiment.

Procedures

- (i) Put the required amount of soil in a mortar.
- (ii) Use the mortar and pestle to break the soil lumps (clods) without breaking the particles.
- (iii) Put the soil in a sieve with the largest mesh diameter of 2.0 mm and shake vigorously.
- (iv) Weigh the soil remaining on the sieve and record.
- (v) Repeat the process using other sieves with mesh diameters of 0.2 mm, 0.02 mm and 0.002 mm and record the results.

Questions

- a) Suggest aim of the experiment (**1 mark**)

Answer (1 mark)

To determine soil texture

- b) How the experiment help the farmer to improve soil properties for proper plant growth.

Answers (1 mark@= 5marks)

- ☐ Affect water holding capacity
 - ☐ Affect root penetration
 - ☐ Water infiltration
 - ☐ Affects Micro organisms
 - ☐ Soil aeration
- c) Calculate the percentage composition of sand, clay and silt based on the original soil sample. (**3 marks@=9 marks**)

%Sand= sand weight/ total sample weight x 100

% silt = silt weight/ total weight X 100

%clay = clay weight/ total weight X 100

- d) Use the percentage composition of sand, silt and clay to determine the textural class of the soil sample in the textural triangle.

Answer

Soil is sandy loam (5 marks)

2. You are provided with specimen M₁, M₂, M₃, and M₄. Carry out an experiment using the given procedures below to make solution.

Procedures

- i. Take 100ml of M₂ into beaker
- ii. Add M₄ into beaker containing M₂
- iii. Take 1 tea spoon of M₃ and add into beaker containing M₂ and M₄
- iv. Add 1 tea spoon of M₁ into beaker containing the mixture of M₂, M₃ and M₄
- v. Using stir rod mix the mixture until the clear solution is observed

Questions

- i) List down the possible components of the solution mixture obtained. **(04 Marks)**

Answers (1 mark@= 4 marks)

- ☐ Cod liver oil – M₁
- ☐ Warm water- M₂
- ☐ Castor oil - M₃
- ☐ Beaten egg- M₄

- ii) How soon after birth should young animal receive solution mixture? **(03 mark)**

Answers (03 mark)

- ☐ Soon after birth and three times a day within five days

- iii) What are the importance of solution mixture to young animal **(4 marks)**

Answers (1mark @= 4marks)

- ☐ It is highly nutritious
- ☐ It is highly digestible
- ☐ It reach in antibodies
- ☐ It act as a mild laxative
- ☐ It is highly palatable

- iv) Calf can be fed using natural method or artificially feeding. State why farmers is encouraged to apply artificial method than natural methods (**4 marks**)

Answers

Advantages of artificial feeding (bucket feeding) (0.5 @= 2marks)

- ☐ Easy to keep production record/ milk yield of the cow
- ☐ Possible to regulate the amount of milk given to the calf
- ☐ The cow does not need the presence of calf in order to let down milk
- ☐ Easy to maintain high hygiene standard

Disadvantage of natural feeding (0.5 @= 2marks)

- ☐ May underfeed the calf
- ☐ Cows may not let down milk in case the calf dies
- ☐ Difficult to keep accurate production records.
- ☐ Easy transmission of diseases

3. You are provided with specimen R₁, R₂ and R₃ observe them carefully and answer questions that follow.

Questions

- a)i. Give the possible name of a disease on specimen R₁ (**1 mark**)

Answers

Blossom end rot

- ii. Suggest possible causes of a disease above. (**3 marks**)

Answers

- ☐ Too much nitrogen in the early stage
- ☐ Infrequent or irregular watering
- ☐ Calcium deficiency in young fruits

- iii. State three the control measures of the disease. (**3marks**)

Answers

- ☐ Apply recommended dose of nitrogen
- ☐ Practice regular watering
- ☐ Supply calcium during the early stage of fruits

- b) i. Give the common and scientific name of specimen R₂ (**1 mark**)

Answers

Common name, **maize stalk borer. *Busseola fusca***

- ii. Give the name of crops commonly attacked by specimen R₂ (**1 mark**)

Answers

Maize, sorghum, oats, barley, millet and wheat

iii. Suggest four control measures against specimen R₂ (2 marks)

Answers (0.5 mark @ = 2 marks)

- ☐ Field hygiene
- ☐ Use of insecticides
- ☐ Close season
- ☐ Crop rotation
- ☐ Use of resistance variety

c) i. Provide common three species of specimen R₃

Answers. (1 mark@ = 3 marks)

migratoria locust (Locust migratoria)

Red locust (Nomadacris septemfasciata)

Desert locust (Schistocerca gregaria)

ii. Give the damage that might be caused by specimen R₃ (1 Mark)

ANSWERS

Boring the plant stem