Candidate's Name :.....

Signature:.....

Random No.						Personal No.		

(Do not write your School/Centre Name or Number anywhere on this booklet.)

527/2
PRINCIPLES AND PRACTICES OF AGRICULTURE
(Practical)
Paper 2
Oct./Nov. 2023
2 hours

UGANDA NATIONAL EXAMINATIONS BOARD

Uganda Certificate of Education

PRINCIPLES AND PRACTICES OF AGRICULTURE
(PRACTICAL)

Paper 2

2 hours

INSTRUCTIONS TO CANDIDATES:

This paper consists of **five** *questions.*

Answer **all** *the questions.*

The answers are to be written in the spaces provided.

For Examiners' Use Only		
Question	**Marks**	**Examiner's Signature and No.**
1.		
2.		
3.		
4.		
5.		
Total		

Turn Over

1. You are provided with specimens **A** and **B** which are soil samples.

(a) (i) Measure **40** cm^3 of specimen **A** into a measuring cylinder.

(ii) Using another measuring cylinder, add **40** cm^3 of water to the **40** cm^3 of specimen **A** in the measuring cylinder and observe. Record your observations in table **1**.

(iii) Using a stirring rod, stir the mixture in the measuring cylinder thoroughly and leave it to settle. Read the final volume, V_2 , of the mixture and record it in table **1**.

(iv) Repeat the procedure (i) to (iii) using specimen **B** and complete table **1**.

Table 1 *(06 marks)*

	Specimen **A**	Specimen **B**
Volume of specimen used (cm^3)		
Volume of water added to the specimen (cm^3)		
Observation made		
V_1 = (Volume of specimen used + volume of water added) (cm^3)		
Final volume of the mixture after stirring, V_2 (cm^3)		
$V_1 - V_2$ (cm^3)		

(b) Using the results obtained from the experiment above;

(i) explain why V_1 is different from V_2 for each of the specimens **A** and **B**. (*01 mark*)

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.....

.....

(ii) give a reason why the value of $(V_1 - V_2)$ for specimen **A** is different from the value of $(V_1 - V_2)$ for specimen **B**. (*01mark*)

.....

.....

.....

(iii) which soil sample would you choose for crop growing? Give a reason for your answer.

Soil for crop growing (*01 mark*)

.....

Reason (*01 mark*)

.....

2. Specimens **C** and **D** are livestock parasites. Observe them carefully using a hand lens and answer the questions that follow.

(a) Name **four** parts of the host animal on which Specimen **C** is normally found. (*02 marks*)

.....

.....

.....

.....

(b) Using **two** observable features in each case, explain how each specimen is adapted for its mode of life. (*04 marks*)

Specimen **C**

.....

.....

.....

Specimen **D**

.....

.....

.....

.....

(c) State **two** effects of each of the specimens on the host animal. *(04 marks)*

Specimen **C**

(i)

.....

.....

(ii)

.....

.....

Specimen **D**

(i)

.....

.....

(ii)

.....

.....

3. You are provided with specimens F_1, F_2 and F_3 which are animal products.

(a) Observe specimens F_1, F_2 and F_3 provided then describe the appearance of each specimen. *(03 marks)*

F_1

.....

.....

F_2

.....

.....

F_3

.....

.....

(b) (i) Carry out the following tests in table **2** and record your observations in the table. *(02 marks)*

Table 2

Specimen	Observation on boiling.
Put 2 mls of specimen F_1 in a test tube and boil.	
Put 2 mls of specimen F_2 in a test tube and boil.	

(ii) Explain your observations stated in table **2**. *(02 marks)*

.....

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.....

.....

(c) In table **3**, comment on the suitability of the consumption of specimens F_1, F_2 and F_3. Give a reason in each case.

Table 3. *(03 marks)*

Specimen	Suitability for consumption	Reason
F_1		
F_2		
F_3		

4. You are provided with specimens X_1, X_2, X_3 and X_4 which are weeds.

(a) Observe the specimens and name the structure each specimen uses for propagation in table **4a**. *(02 marks)*

Table 4a

Specimen	Structure for propagation
X_1	
X_2	
X_3	
X_4	

(b) Based on the propagation structures named in (a), suggest with **one** reason, **two** effective methods of controlling each specimen in table **4b**. *(08 marks)*

Table 4b

Specimen	Control Method	Reason
X_1	(i) ..... (ii).....	(i) ....
X_2	(i) ..... (ii).....	(i) ....
X_3	(i) ..... (ii)	(i) ....
X_4	(i) ..... (ii)	(i) ....

5. You are provided with specimens **P**, **Q** , **R** and **S** which are common workshop tools.

(a) Identify each specimen. *(02 marks)*

P .....

Q .....

R .....

S .....

(b) In table **5**, state the function of each specimen in the construction of a feed trough. *(04 marks)*

Table 5

Specimen	Description of function of the specimen
P	.....
Q	.....
R	.....
S	.....

(c) State the measures that should be taken to keep each of the specimens **P** and **Q** in good working condition.

P *(02 marks)*

.....

.....

Q *(02 marks)*

.....

.....

END