

NAME: **BIOLOGY PAPER 1 SCORING GUIDE 2025**

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SCHOOL: **MEBU EXAMINATIONS CONSULT MOCK ASSESSMENTS 2025**

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BIOLOGY PAPER 1

(THEORY)

MOCK 2025

JULY/AUGUST

TIME: 2 HRS: 30 MIN



MEBU EXAMINATIONS CONSULT

Uganda Certificate Of Education

MOCK ASSESSMENTS 2025

BIOLOGY PAPER 1

(THEORY)

TIME: 2 HRS: 30 MINS

X
40

INSTRUCTIONS TO CANDIDATES

This paper consists of **seven** examination items. It has **two** sections; **A** and **B**.

Section **A** has **three** compulsory items.

Section **B** has two parts; **1** and **11**. Answer **one** item from each part.

Any additional item(s) answered will **NOT** be scored

RESPONSE

ITEM ONE

(a)

- Flooding led to leaching of nutrients to the deeper layers of the soil hence depriving nutrients to plants. Hence low yields. ✓ Ue
- A day spell led to increased temperatures which can lead to wilting of the plants hence reducing on the crop yields. ✓ Ue
- Flooding also resulted into water logging hence depriving the soil enough oxygen to support growth hence leading to low productivity. ✓ Ue ✓ Ue

Any 2=Ue=4

(b)

- The leaves of the plants appeared folded which reduced the rate at which plants lose water hence reducing on water stress in plants. ✓ Ae
- The plants managed to use little nutrients present in the soil to carry out life processes like growth hence giving some yields. ✓ Ae
- The plant leaves were also hairy which reduced on the rate of transpiration which in turn increased on productivity. ✓ Ae

Any 2=Ae=4

ITEM TWO

(a)

- Jeremy's lifestyle can lead to brain damage. ✓ UI
- Can lead to lung cancers. ✓ UI
- Can lead to cardiovascular diseases like atherosclerosis. ✓ UI

Any 1 UI=1

(b). On touching the sauce pan, the receptors in the skin received the stimulus (heat) and converted them to nervous impulses, these were then sent to the sensory neuron which transfers them to the spinal cord for interpretation, within the spinal cord, the relay neurone receives

impulses from the sensory neuron and transfers them to the motor neurone which in turn sends the impulses (feedback) back to the effectors in the hands (**biceps and triceps muscles**).these causes the muscles to contract and relax respectively to withdraw the hand from the hot sauce pan.

Ue=4

(c)

- Jeremy should go for medical checkups to know the state of his body.
- Should attend guidance and counseling sessions in order to quit smoking.
- He should focus on work and avoid smoking while at work.

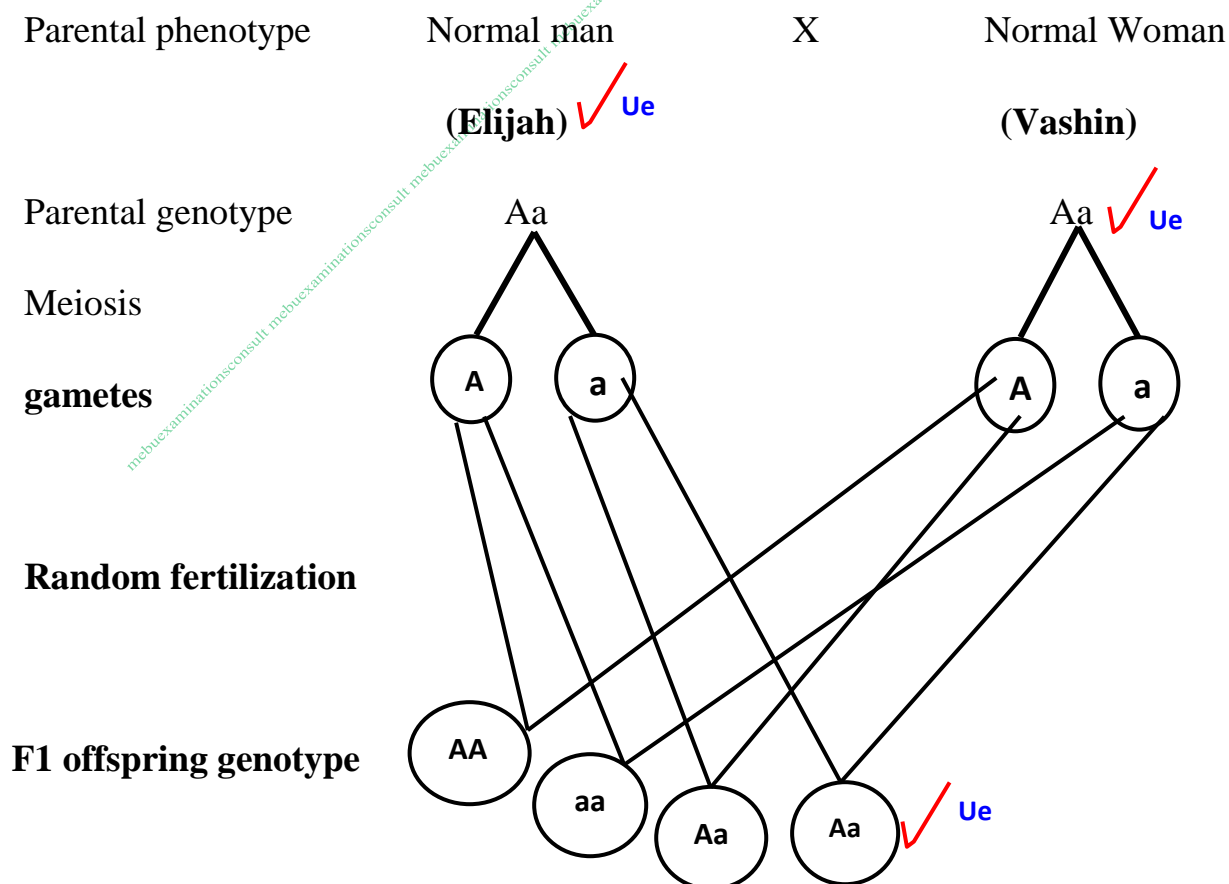
Any 3 Ae=3

ITEM THREE

(a).Elijah should not abandon his wife because albinism is a generic disorder that can manifest in children even if the parents are normal as shown below:

Let A represent allele for normal skin colour.

Let a represent allele for albinism.



F1 offsprings phenotype Normal Albino Normal Normal

As observed in the genetic crosses above, two normal parents can give birth to an albino child.

Therefore, Elijah should not abandon the child.

Ue=6

(b)

- The child may experience social problems like being isolated from other normal children.
- The child may experience health problems like skin cancer due to exposure to much sunshine.

Any 1 UI=1

(c)

The parents should go for medical consultation on how to manage the condition of the child.

- The parents should support the child emotionally amidst social challenges the child may face.
- The parents should engage the community/neighbors to support the child socially.

SECTION B

PART 1

ITEM FOUR

(a) The residents of buikwe district experience the following challenges.

- Attack by the wild animals due to the destruction of their habitats.
- They were also faced a challenge of flooding due to the destruction of swamps which control flooding.
- Diseases such as cholera may have a raised due to flooding which circulates human wastes in the environment.
- They also faced a challenge of water scarcity due to the destruction of swamps which could have kept water for longer time.
- Diseases like malaria could also arise as a result of stagnant water caused by flooding in the area.

(b) Conservation of swamps has a great importance to the community as explained below;

- Swamps improve/conserves the biodiversity through harboring a wide range of living organisms. ✓ Ae
- Swamps control flooding by absorbing excess water after a heavy rainfall. ✓ Ae
- Swamps are natural sources of water for both domestic and industrial use. ✓ Ae
- Swamps can also affect tourists hence increasing on the revenue the government collects which can in turn be used in development of infrastructure in the country. ✓ Ae
- Swamps are also sources of raw materials which are used in making mats and other valuable items which are economically important to people ✓ Ae

Any 4 Ae=4

ITEM FIVE

Douglas experienced the challenges of soil erosion which resulted into infertility at the hilltop due to his action of destruction. ✓ Ue

- The plastic bottles disposed in gardens could act as breeding places for mosquitoes which increase malaria cases in the village. ✓ Ue
- The polythene bags thrown in the soil do not allow water to penetrate the soil hence leading to poor drainage of the soil which in turn fails to support effective plant growth. ✓ Ue
- Clearing the forest also reduces on the amount of rainfall received in an area due to the fact that forest aid in rain formation. ✓ Ue

The following are some of the ways they can overcome these challenges;

- Douglas should plant new trees (reforestation) to reduce on soil erosion. ✓ Ue
- He should also use organic fertilizers in his garden to improve on crop productivity. ✓ Ue
- The resident should be sensitized on the dangers of disposing non-biodegradable wastes in the garden. ✓ Ue
- The community members recycle or burn all the plastics and polythene bags instead of disposing them in the garden. ✓ Ue

Any 2 Ue=4

(b)

- Forests help in rainfall formation hence improving on water security. ✓ Ue
- Forests also act as homes of wild animals which are very dangerous to human life. ✓ Ue

- Forests can also attract tourists which increase on the revenue collected by the government.
- Forests are sources of timber for construction and trees are also valuable raw materials used in the paper making industries.

Any 4 Ue=4

PART II

ITEM SIX

(a) **Jordan** took porridge which contains sugar, the porridge is rich in the sugar is rich in sucrose all these helped Jordan as explained below;

The starch was broken down by amylase enzymes to maltose, maltose then was broken down by maltase enzyme to glucose meanwhile the sucrose was broken to glucose molecules, these glucose were then absorbed in the blood stream and taken to the cells where they were broken down to release energy in a process called respiration. The energy produced helped Jordan to with the race.

Any 4 Ue=4

(b) Jordan felt the sharp pains which were as a result of increased lactic acid concentration in his skeletal muscles due to anaerobic respiration, however, he managed to overcome his challenges by resting and breathing in heavily to supply enough oxygen that is used to oxidise lactic acid to carbon dioxide, water and energy. He the used this energy to walk back to school.

Any 4 Ae=4

ITEM SEVEN

The right person to donate blood is the father of blood group **O** because blood group **O** lacks antigens **A** which would agglutinate with antibodies **B** found in blood group **A** of the child. However, if the brother of blood group **B** donates, there will be agglutination of antigens **A** and antibodies **a** in the blood of the baby, the same agglutination would occur if the mother of blood

✓ Ue

group **AB** donated because the antibodies **B** in the Childs blood would agglutinate with the antigens **B** in the mothers blood.

Any 4 Ue=4

(c) Due to the fact that Diana smokes, she will experience the following challenges.

- Cardiovascular diseases like atherosclerosis. ✓ Ae
- Excessive smoking can cause brain damage. ✓ Ae
- Yellowing of the teeth which can lead to decay. ✓ Ae

Any 2 Ae=4

However, she can overcome the challenges by;

- Going for medical checkups to know his health status. ✓ Ae
- Attending guidance and counseling sessions to learn more about the dangers of smoking. ✓ Ae
- Going to recreational centers and staying busy to avoid smoking. ✓ Ae

Any 2 Ae=2

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