

SUBJECT: BIOLOGY

CLASS: FORM 1

TOPIC 1: INTRODUCTION TO BIOLOGY.

1. State two characteristics of living things illustrated in the photograph below.



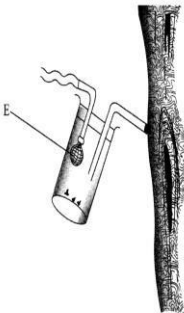
Reproduction

Growth and development

2. Define Biology

Study of the living organisms.

3. Below is an illustration of a piece of apparatus strategically positioned to trap some organisms.



- (a) Name the apparatus.
- Pooter/Aspirator;
- (b) State the function of the part labelled E.

-To prevent dirt/insects from entering the suction tube/into the mouth.

4. What biological knowledge or study is required in dealing with locusts that infest a maize crop.

Entomology

5. State the importance of each of the following in living organisms. i) Respiration

Helps an organism break down food to produce energy.

- ii) Reproduction

Give rise to young ones of same ensuring continuity of the group.

6. What do the following branches of Biology entail? (2marks)

(a) Cytology

The study of cells in living organism;

b).Entomology

The study of insects.

7. State the functions of the following apparatus.

(i) Bait trap

Attracts organisms using food as a bait; and traps them.

(ii) Pooter

Sucks small organisms from bark of a tree;

8. Name **two** major branches of Biology.

- Botany;

- Zoology

9. State **two** characteristics of living organisms that are specific to plants.

Autotrophic nutrition; Limited movement,

Limited excretory products/unspecialized excretory structures; Growth takes place in specific region; Alternation of generation;

10. Give the name to the study of:

(a) The cell

Cytology;

b).Micro-organism

Microbiology

11. In what **two** ways does excretion differ between plants and animals?

| PLANTS | ANIMAL |
|--|----------------------------------|
| Waste products are fewer | Waste products are more |
| Less complex excretory structure | Have complex excretory structure |
| Waste products are stored as harmless products | Waste products are more toxic |

12. State the importance of Locomotion in a living organism

-aquire resources (food, water shelter);

- Escape from predators;

-to get mates;

-To escape harmful stimuli;

13. Name the branch of Biology that deals with the study of Fungi. **Mycology;**

14. State the importance of each of the following in living organisms:

(a) Nutrition

Acquisition and utilization of nutrients;

b).excretion.

Elimination of metabolic wastes to prevent accumulation to toxic level;

15. Describe the Characteristics of Living Things.

Nutrition

Nutrition is the processes by which food/nutrients are acquired/made and utilized by living organisms

Green plants and certain bacteria make their own food

All other organisms feed on complex organic materials

Respiration

This is the breakdown of food to provide energy

The energy released is used for various activities in the organism

Gaseous Exchange – Process through which respiratory gases(CO_2 & O_2) are taken in and out through a respiratory surface

Excretion

Excretion is the removal of metabolic wastes from the body
Substances like urea, carbon dioxide (Carbon (IV) oxide)
These substances are poisonous if allowed to accumulate in the body

Growth and Development

Growth means irreversible change in size
All organisms increase in size that is, they grow
Development is irreversible change in complexity
As they do so, they also become differentiated in form
Reproduction-Reproduction is the formation of new individuals of a species to ensure continued existence of a species and growth of its population

Irritability

The ability of organisms to detect and respond to changes in the environment

This is of great survival value to the organism

Movement

Is the progressive change in position from one place to another.
Some organisms are sessile (ie fixed to the substratum)
The majority of plants move only certain parts

Collection and Observation of Organisms Biology as a practical subject is learnt through humane handling of organisms

16. State the importance of irritability to living organisms. **Enhance survival of organism;**

17. How does movement in plants differ from that of animals?

Movement in plants is localized/ move parts of their bodies while animals move their whole body as well as parts of their bodies;

18. Give **two** reasons for studying Biology.

Entry into careers;

Gain scientific skills;

Help in solving environmental problems;

Useful in international co-operation;

19. State **one** use for each of the following apparatus in the study of living organisms. (a)

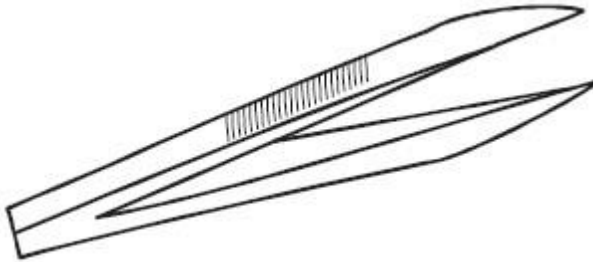
Hand lens.

Enlarge / magnifying tiny specimens which cannot be seen clearly using naked eyes; (b)

Pair of forceps.

For picking up small crawling animals /stinging animals; 20.

Identify the following apparatus and state its functions.



i).Name. **Pair of forceps;** ii)

Function.

Picking up small crawling animals;

21. Name the field of science that specializes in the study of chemical changes in an organism.

Biochemistry

22. List three skills acquired from learning biology. **-Teamwork.**

-Technical ability.

-Problem solving.

-Organization.

-Numeracy.

-Communication.

-Attention to detail.

-Administration.

-Analytics.

-Discipline.

23. What biological knowledge or study is required in dealing with locusts that infest a maize crop?

Entomology

24. What do the following branches of Biology entail?

(a) Cytology

The study of cells in living organism;

(b) Entomology

The study of insects.