FORM 1 BIOLOGY MARKING SCHEME

1. Define the term Biology. (1 mk)
   - Branch of science which deals with the study of living things

2. Name and define the two main branches of biology. (4 mks)
   (i) Zoology – Scientific study of animals
   (ii) Botany – Scientific study of plants.

3. State the name given to the following:. (4 mks)
   (i) Study of living things and their surrounding.
   Ecology

   (ii) Study of inheritance and variation
   Genetics

   (iii) Study of insects
   Entomology

   (iv) Study of parasites.
   Parasitology

4. State four ways in which study of biology is useful. (4 mks)
   (i) Solving environmental problems
   (ii) Entry into careers
   (iii) One gains scientific skills
   (iv) Creates international cooperation

5 . (a) List eight characteristics of living organisms. (8 mks)
   (i) Nutrition
   (ii) Respiration
   (iii) Gaseous exchange
   (iv) Excretion
   (v) Growth and development
   (vi) Reproduction
   (vii) Irritability
   (viii) Movement

   (b) Define each of the characteristics of living thins stated in 5(a) above. (9 mks)
   (i) Nutrition - Process by which living organisms acquire and utilize nutrients
   (ii) Respiration - chemical breakdown of food to release energy.
   (iii) Gaseous exchange- Movement of respiratory gases across a respiratory surface

   (iv) Excretion – Removal of metabolic wastes from the body
   (v) Growth - is the irreversible increase in size and mass of an organism
   Development – is irreversible increase in complexity of the organism.
   (vi) Reproduction – process by which living organisms give rise to new individuals of the same king.
   (vii) Irritability – ability to perceive change in the environment and respond appropriately.
   (viii) Movement – Change in position of part or whole of the organism.

6. (a) What is a specimen? (1 mk)

- Its part or whole organism that is being studied/used for study of biology.

(b) Explain how the following apparatus are used in collection of specimen. (3 mks)

Apparatus	Use
Sweep net	**Catching flying insects**
Fish net	**Trapping small water animals eg fish**
Pooter	**Sucking small animals from surfaces**
Bart trap	**Attracting and trapping small animals eg rats**
Pit fall trap	**Catching crawling animals**
Pair of forceps	**Picking up small crawling animals**

7. Study the apparatus shown below.

(a) Name the apparatus shown. (1 mk)

- Hand lens

(b) State the use of the apparatus. (1 mk)

- Enlarging objects

(c) Name the parts A - **Frame**

B - **Convex lens**

C Handle

8. (a) List four difference between plants and animals (4mks)

Plants	Animals
Have chlorophyll hence manufacture their food	Lack chlorophyll hence feed on ready made food
Cells have cellulose	cells have cell membrane and lack cell wall
Respond slowly to stimulus change in environment)	Quick response to stimuli
Don't move about	Move about for food, shelter
Lack specialized excretory organs	Have specialized complex excretory organs

9. Outline four precautions during collection and observation of specimens. (4mks)
(i) Collect only number needed to avoid wastage
(ii) Do not harm specimen during capture/collection
(iii) Do not destroy the natural habitat
(iv) Handle with care injurious/dangerous specimen
(v) Immobilize highly mobile animals for easy study
Return live specimens to their habitat where possible.