**BIOLOGY FORM 2**

**MARKING SCHEME**

**OPENER TERM 1 2023**

1. Name **two** structures found in plant cell that are absent in animal cell (2 mks)

* cellulose cell walls
* chlorophyll

a) Active transport refers to the process through which substances are moved across the cell membrane and **against a concentration gradient.**

(1 mk)

* b) It helps in re-absorption of sugars and some salts by the kidney to the bloodstream.
* It helps in absorption of some mineral salts from the soil by roots.
* Absorption of digested food from alimentary canal of animals into the bloodstream.
* It leads to accumulation of substances into the body to offset osmotic imbalance in arid and saline environments
* It plays a role in excretion of waste products from body cells.

1. a) Give the uses of the following apparatus (2 mks)

i.These are bottles used for keeping collected specimen.

ii.This is used for sucking small animals from rock surfaces or barks of trees.

**3**.Collect only the number of specimen you need; do not collect more than you need.

* Do not harm the specimen during the capture/collection exercise.
* Do not destroy the natural habitat of the specimens.

Handle dangerous/injurious specimens with care. Such injurious specimens can be stinging plants or insects. Forceps and hand gloves should be used in such cases

**4**Name the carbohydrate that is

1. Stored in plant seeds **STARCH**  (1 mk)
2. Stored in mammalian muscles **GLYCOGEN**  (1 mk)
3. Most abundant in human blood **GLUCOSE** (1 mk)

**5**.The scientific name of an onion is ***Allium cepa*** Identify the genus and the species to which the organism belongs (2 mks)

1. Genus **Allium**
2. Species **cepa**
3. Source of energy

Form of food storage

Provide mechanical support to organisms (2 mks)

1. Amino acids

* E.Basal metabolic rate
* Occupation
* Health of an individual
* Age
* Sex
* Body size
* Environmental temperature

**6**. i **lower case letters** ***(3mks)***

***demarcation included***

**7**a) High temperatures **above 400c**;

b) • Villi;

• Microvilli;

• Long

8. a.) Hypertonic (1mk)

b.) Crenation (1mk)

9. i, To catch / trap crawling animals

ii.Attract and trap small animals

10. i.) Not underlined **separately**

Species name started with a capital letter/ upper case (2mks)

ii.) Universally accepted by scientists acc. Uniformity

Is a ‘dead’ language i.e lacks indigenous speakers

11. Optimum temperature

Optimum light intensity

Increase in CO2 concentration

Increase in amount of water (2mks)

12. Diameter of one cell = Field of view Diameter

Number of cells

= 4mm

8

= 0.5 mm;

1mm = 1000 micrometers

0.5 mm = ( 0.5 x 1000);

1

= 500 micrometers;

13. i.) Enhance/ easy diffusion/ absorption of iodine solution

ii.) For the section/ cells not to dry up/ die/

Keep the section/cells alive/ Maintain the shape of cells/ section

iii.) Hold the specimen in position

(3mks)

14. opening and closing of stomata in plants-

Absorption of water from the soil

support in herbaceous plants and young seedlings.

feeding in insectivorous plants-

osmoregulation

15 i.) Carnivorous Rj. Carnivore

ii.) Presence **pointed/ large** canines

Presence of carnassial teeth (2mks)

iii.) Incisor correctly labeled in the diagram. (1mk)

16. a.) Process by which green plants manufacture food from **Carbon (IV) oxide** and **water** in the presence of light