**BIOLOGY FORM 2**

**OPENER TERM 1 2023**

**TIME: 1 ½ HOURS**

**50 MARKS**

**NAME………………………………….…………... ADM NO……………..CLASS………**

**Attempt all question**

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

a) Define active transport (1 mk)

b) What is the significance of active transport in living organisms (2 mks)

1. a) Give the uses of the following apparatus (2 mks)
2. Specimen bottle
3. Pooter
4. State **two** necessary precautions to be observed when collecting specimens (3 mks)
5. Name the carbohydrate that is
6. Stored in plant seeds (1 mk)
7. Stored in mammalian muscles (1 mk)
8. Most abundant in human blood (1 mk)
9. The scientific name of an onion is ***Allium cepa*** Identify the genus and the species to which the organism belongs (2 mks)
10. Genus
11. species
12. Outline two functions of carbohydrate in living organism (2 mks)
13. What are the building blocks of proteins (1 mk)
14. Give **two** factors that determine energy requirement in human beings (2 mks)

6. A certain animal has no incisors, no canines, six premolars and six molars in its upper jaw, in the lower jaw there are six incisors, two canines, six premolars and six molars. Write its dental formula? (3marks)

7a) State a factor that denatures enzymes (1mark)

b) Name the features that increase the surface area of small intestines. (2marks)

8. The diagram below shows what happens to red blood cells when it was put in a solution.



1. Name the type of solution in which the cell was put. (1mk)

1. Name the process demonstrated in the diagram. (1mk)

9. Name the functions of the following apparatus.

i.) Pitfall trap (1mk)

ii.) Bait trap (1mk)

10. The scientific name for cat is Canis Domestica.

i) Identify two mistakes made in writing the name above. (2mks)

ii) State two reasons why latin language are preferred when writing the above name. (2mks)

11. State two factors that increase the rate of photosynthesis. (2mks)

12. Raymond observed eight epidermal cells across the field of a light microscope. If the diameter of the field of the field of view is 4mm, estimate the average size of each cell in micrometer. Show your working. (3mks)

13. Give the reason for carrying out the following procedures when preparing wet mounts of plant tissues.

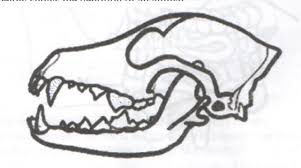
i.) Making very thin sections (1mk)

ii.) Adding water on the plant section (1mk)

iii.) Placing cover slip over the plant section (1mk)

14. Give three roles of Osmosis in living organisms. (3mks)

15. The diagram below represents the jaw of a mammal.



1. Name the mode of nutrition of the mammal whose jaw is shown. (1mk)
2. Give two observable reasons for your answer in 20 i.) above (2mks)
3. Label the incisor tooth in the diagram. (1mk)

16. a) Define the term photosynthesis. (1mk)