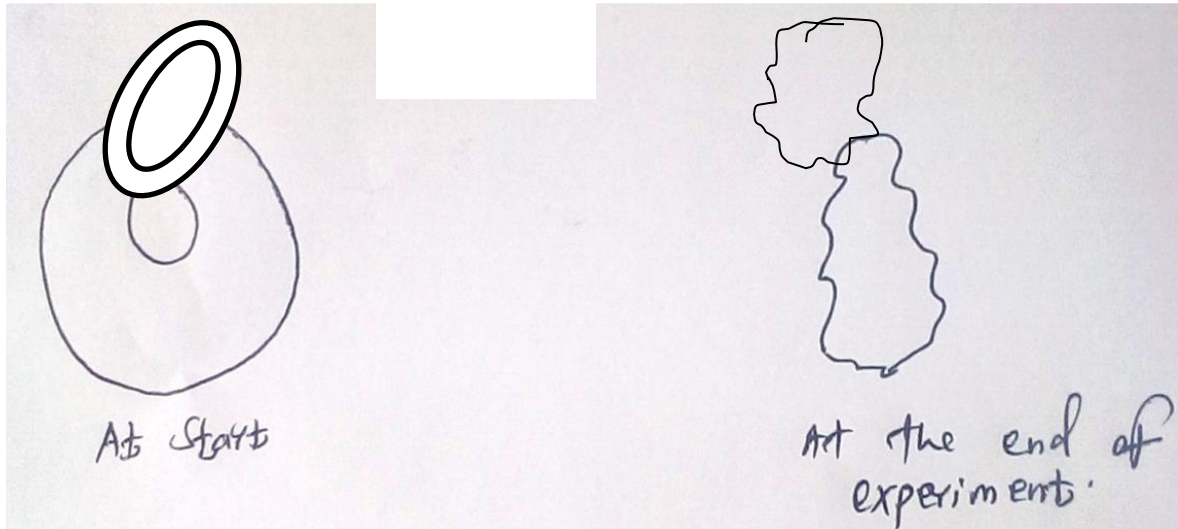


BIOLOGY
FORM 2

1. The Diagrams below show a Red Blood cell that was subjected to a certain treatment.



a) Account for the shape of the cell at the end of the experiment. (2mks)

b) Draw a diagram to illustrate how a plant cell would appear if subjected to the same treatment. (2mks)

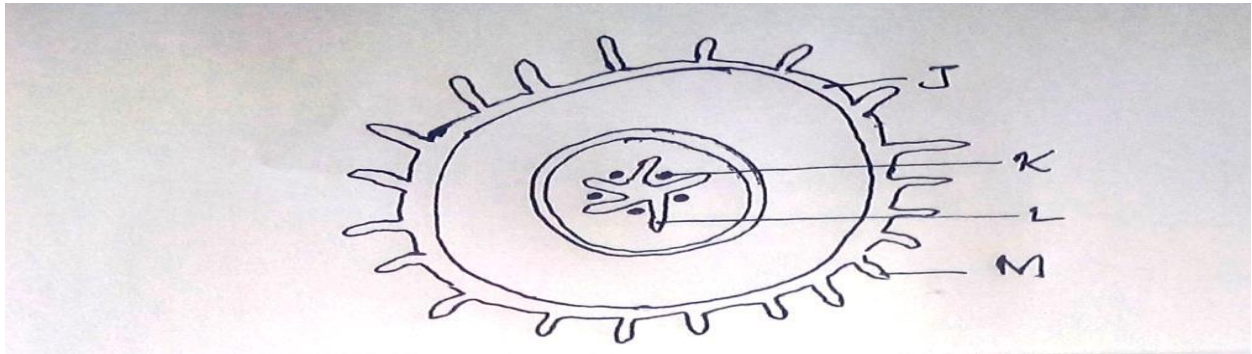
2. The diagram below shows a human tooth.



a) Identify the tooth. (1mk)

b) How is the tooth adapted to its functions. (2mks)

3. The diagram below represents a transverse section through a plant organ.



a) From which plant organ was the section obtained. (1mk)
 b) Give two reasons for your answer in (a) above (2ks)

c) Name the parts labeled J K and L. (3mks)

d) State two functions of the part labeled M. (2mks)

4. Explain how each of the following factors affects the rate of photosynthesis (2mks)
 i) Temperature

ii) Chlorophyll concentration. (2mks)

5. Name the tissues in plants responsible for: (2mks)
- a) Transport of water and mineral salts

 - b) Transport of carbohydrates
6. State one adaptation of xylem vessels to their functions . (1mk)
7. (a) Why are people with blood group O universal donors? (2mks)
- (b) A person whose blood group is AB requires a blood transfusion. Name the blood groups of the donors. (2mks)
8. Name the organelles that performs the following functions in a cell (2mks)
- Protein synthesis

 - Transport of cell secretions
9. State one use for each of the following apparatus in the study of living organisms. (2mks)
- a) Pooter

 - b) Pitfall trap
10. A 'dolf' is an offspring between a wolf and a dog. This animal is infertile. Give a reason for this. . (1mk)

11. State the role of light in photosynthesis (2mks)
12. Name a disease caused by lack of each of the following in human diet. (2mks)
Vitamin D-
Iodine
13. The following is the dental formula of a certain mammal.
I $\frac{0}{3}$ C $\frac{0}{1}$ pm $\frac{3}{3}$, molar $\frac{3}{3}$
- a) State the likely mode of feeding for the mammal. (1mk)
- b) Give a reason for your answer in (a) above. (1mk)
14. Explain why the rate of transpiration is reduced when humidity is high? (2mks)
15. Why are plants able to accumulate most of their waste products for long. (1mk)
16. State two ways by which acquired immune deficiency syndrome (AIDS) virus is transmitted. . (2mks)
17. State three structural differences between arteries and veins. (3mks)

18. State three difference between open and closed circulatory systems. (3mks)

19. Explain two protective functions of blood. (2mks)