***THE CENTRAL***

***PUBLISHERS***

***Biology exam***

***TIME: …………………………………***

***NAME……………………………………………………***

 ***STREAM…………………………………………..***

***231***

***BIOLOGY***

***FORM TWO***

***SERIES TWO TERM TWO 2018***

***TIME: 2 HOURS***

***TOTAL 100 MARKS***

1. State the functions of the following parts of a microscope (3mks)
2. Mirror
3. Fine adjustment knob
4. Diaphragm
5. State the formula for calculating magnification of an object using a light microscope. Use the formula to calculate magnification from the information below.
6. The formula (1mk)
7. Calculate magnification where eye piece lens magnification is X40 and objective lens magnification is X60 (3mks)
8. Draw and label a plant cell as observed under a light microscope (6mks)
9. State and explain how the following cells are specialized (4mks)
10. Sperm cell
11. Root hair cell
12. Red blood cell
13. Palisade cell
14. Differentiate between the following terms as used in biology. (4mks)
15. A cell and a cell organelle
16. Digestion and egestion
17. Osmosis and diffusion
18. State three functional differences between arteries and veins. (3mks)
19. State three forces involved in water movement in xylem. (3mks)
20. Explain the meaning of the following terms as used in nutrition in plants. (3mks)
21. Saprophytism
22. Parasitism
23. Symbiosis
24. a) calculate the dental formula from the formula below.(2mks)

 I 0/3; c 0/1; pm 3/3; m 3/3; =

1. state the mode of feeding of the above dental formula
2. Use the diagram below to answer questions below.

a). State the digestive juice produced in part : (2mks)

 i) a

 ii) b

 b). State three digestive enzymes secreted at part k (3mks)

c). State three salivary glands in the mouth. (3mks)

1. i).state the two stages of photosynthesis and the site where they take place in the leaf. (4mks)

 ii). Explain how the following factors affect the rate of diffusion (3mks)

 a). Temperature

 b). Size of molecules

 c). concentration gradient

1. a). The diagram below represents a chloroplast. Use it to answer question 12

 i). label part (4mks)

 **K\_\_**

 **l\_\_**

 **M\_\_**

 **N\_\_\_**

b). The diagram below represents internal structure of a leaf. Use it to answer question 12 b

 i). label part (4mks)

 K

 L

 M

 N

 II). Name substance Q and P (2 mks)

1. a). The diagram below represents diagram of a cell membrane

 Label part (3mks)

 K

 L

 M

 b). state three characteristics of a cell membrane (3mks)

14. State the functions performed by the following cell organelle (3mks)

 a).ribosomes

 b). cell membrane

 c). mitochondrion

15. Draw and label internal structure of mammalian heart (8mks)

16. State three diseases of circulatory system (3mks)

17. State three functions of protein in animal’s body (3mks)

18.Describe how small intestines are adapted to their functions (10mks)

19.Explain any five factors affecting energy requiremrnts in human being.(10mks)