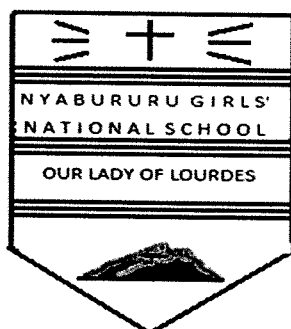


NAME.....CLASS.....C/NO...ADM/NO.....SIGN.....



<i>Date done</i>	
<i>Invigilator</i>	
<i>Date returned</i>	
<i>Date revised</i>	

231/1
BIOLOGY
FORM THREE
TERM 1
CAT 1
TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES

- Write your **name, admission number** and **class number** in the spaces provided.
- Answer **all** the questions in the spaces provided.
- All workings **MUST** be clearly shown where necessary.

FOR EXAMINERS USE ONLY

Question	Maximum Score	Candidate's Score
1 - 22	80	

NAME.....CLASS.....C/NO...ADM/NO.....SIGN.....

1. State the functions of the following (2Mks)

i) Forceps

.....
.....
.....
.....

ii) Sweep net

.....
.....
.....
.....

2. Explain the following characteristics of living things. (2mks)

i) Excretion

.....
.....
.....
.....

ii) Growth and development

.....
.....
.....
.....

3. Explain why the following processes is important when using a microscope and preparing slides.

a) Use fine adjustment knob when using high power objective (1mk)

.....
.....
.....
.....

4. Name the organelles that:- (1mks)

a) Controls passage of substances in and out of the cell.

.....
.....

b) Is the site of protein synthesis? (1mk)

.....
.....

NAME.....CLASS.....C/NO...ADM/NO.....SIGN.....

5. a) Give the formula of working out the magnification of a microscope. (1mk)

b). Calculate the magnification that is obtained when an object is viewed with x10 eye piece and x100 objective lens. (2mks)

.....
.....
.....
.....
.....

c) State **two** properties of the cell membrane (2mks)

.....
.....
.....
.....

6. Explain how the following factors affect the rate of diffusion. (2mks)

a) Diffusion gradient.

.....
.....
.....
.....

7. Distinguish the following terms.(2mks)

a).Autotrophic nutrition and heterotrophic nutrition.

.....
.....
.....
.....
.....

8. State the end products of light stage of photosynthesis. (3mks)

.....
.....
.....

9. Explain how the following affect the rate of photosynthesis. (4mks)

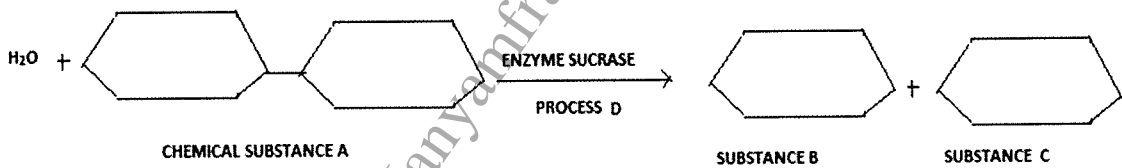
i) Light intensity.

.....

ii. Carbon (IV) oxide concentration

.....

10. The symbol equation below shows what takes place in a certain region of the alimentary canal of man.



i) Name substance (3mks)

A.

B.

C.

ii) Name process D (1mk)

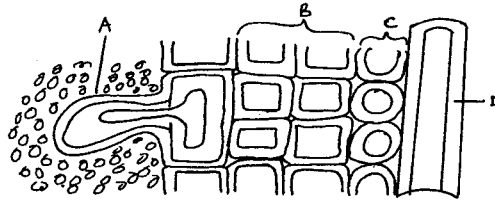
.....

iii) Name part of alimentary canal where the process represented by the equation above takes place. (1mk)

.....

- iv) What is the opposite process of D (1mk)
-
-

11. The diagram **below** shows part of a longitudinal section of a young root.



- (a) Name the parts labeled (4 marks)
- A.....
- B.....
- C.....
- D.....

- (b) State the function of the part labeled A. (1 mark)

- (c) State **two** adaptations of the labeled D to its functions. (2 marks)

.....

.....

.....

.....

.....

12. Name the forms in which the following gases are transported in human beings.

- a) Oxygen (1mk)

.....

.....

- b) Carbon (IV) oxide (2mks)

.....

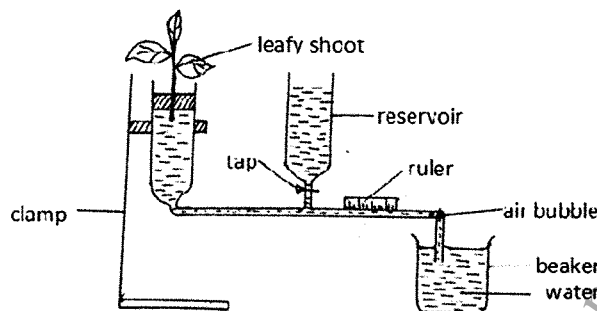
.....

.....

13. State what happens during diastole to the :

- i) Ventricular muscles (1mk)
.....
.....
- ii) Volume in the ventricles (1mk)
.....
.....
- iii) Cuspid valves (1mk)
.....
.....

14. A set up that was used to investigate certain process in plants as shown in the diagram.



- (a) What is this apparatus used for? (1mk)
.....
.....
- (b) Name the apparatus (1mk)
.....
.....
- (c) Giving reasons state **two** precautions that should be taken when setting up the experiment. (2mk)
.....
.....
.....
.....
.....
- (d) What is the role of the reservoir with tap? (2mks)
.....
.....
.....

NAME.....CLASS.....C/NO...ADM/NO.....SIGN.....

(e) State **two** environmental factors that affect the process under investigation. (2mks)

.....
.....
.....

15. Distinguish between a single circulatory system and double circulatory system. (2mks)

.....
.....
.....

16.i) Name the blood vessel that provides the liver with oxygenated blood. (1mk)

.....

ii) Transport blood from heart to the lungs. (1mk)

.....

17.a) State two sites for gaseous exchange in submerged aquatic plants. (2mks)

.....
.....
.....

b) Name the causative agent of Tuberculosis in humans (1mk)

.....

c) Explain the role of chitin ring found in the tracheal system of insects (2mks)

.....
.....
.....
.....

18. Name five organic waste products in plants (5mks)

.....
.....
.....
.....
.....

19. a) what is respiration (1mk)

.....
.....
.....

b) Name the products of anaerobic respiration in:-

(i) plants (2mks)

.....
(ii) Animals (1mk)

c) State **four** factors that affect the rate of respiration (4mk)

.....
.....
.....
.....

20. Which enzyme breaks down hydrogen peroxide to water and oxygen? (1mk)

21. State **three** adaptations of the gill to its functions. (3mks)

.....
.....
.....
.....

22. Name four defects of the circulatory system in humans (4mks)

.....
.....
.....
.....