

GATITU SECONDARY SCHOOL P.O. BOX 327 – 01030 GATUNDU.

BIOLOGY FORM 2 END OF TERM 3 EXAMINATION.

ADM NO. _____ NAME _____

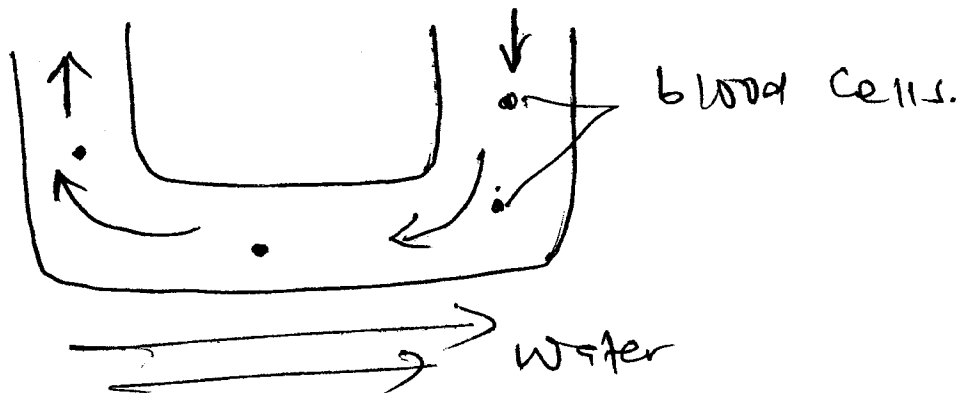
1A. What are the respiratory structure in the following organisms.

i) Amoeba (1mk)

ii) Fish (1mk)

iii) Plants (1mk)

B) The diagram below shows how gaseous exchange occur across the gills in a fish.

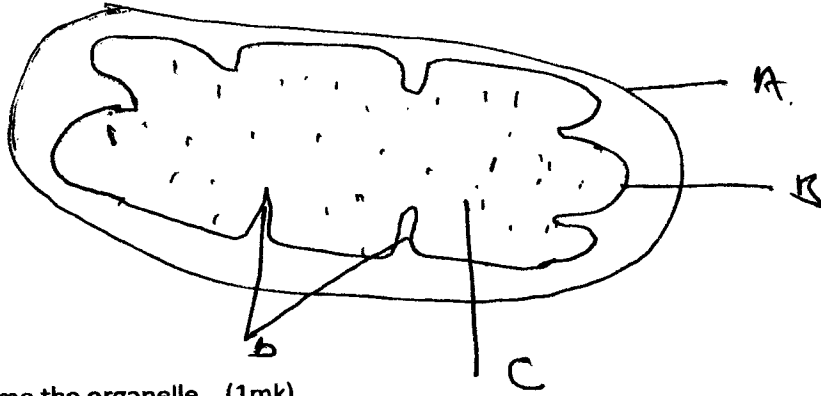


According to the diagram, water and blood flow in the opposite direction across the gills.

i) Give the term used to describe this flow. (1mk)

ii) Explain the advantage of the above flow named in a(i) above (1mk)

2. Below is an organelle that is involved in aerobic respiration.



i) Name the organelle (1mk)

ii) Name the parts labeled

A

B

C

(2mks)

iii) What's the purpose of the infolding labeled D (1mk)

iv) Give the full name of the chemical compound which is formed in this organelle and forms the immediate source of energy for biological activities. (1mk)

3(a) The diagram below shows what happened to a red blood cell when it was put in a solution.



i) Name the type of the solution in which the cell was put

(1mk

ii) Name the process demonstrated in the diagram.

(1mk

iii) Explain this process.

(2mks

b) Name the process by which

i) Organisms get rid of waste products.

(1mk

ii) New organisms are produced.

(1mk

iii) the ray is released from food.

(1mk

4a) State the part of the brain that controls breathing movement in man

(1mk

b) Give 3 ways in which gills are adapted for gaseous exchange.

(3mks

i)

ii)

iii)

c) Give 2 reasons why plants do not possess an elaborate excretory system.

(1mk

i)

ii)

d) Name excretory product in plant that is.

i) Human beings use it for treatment of malaria

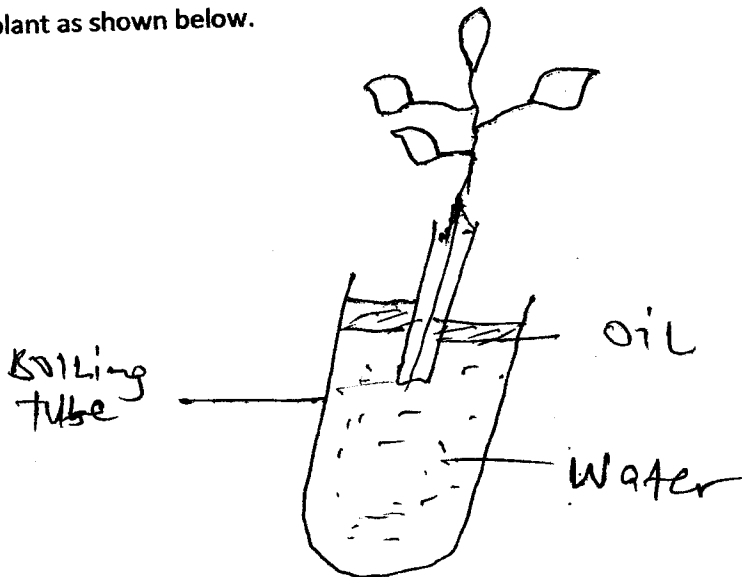
(1mk)

ii) Used food industry as meat tenderizer

(1mk)

iii) Used in genetics in plants and animal breeding and also treatment of cancer. (1mk)

5. An experiment was set up by a form 2 student to investigate a certain physiological process in plant as shown below.



i) Name the process being investigated.

(1mk)

ii)What is the use of oil layer in this experiment. (1mk

iii)What observation did the student make after leaving the set up in bright sunlight for 2 days. (2mks

iv)What effects will the following have on the observation made?

i)Fanning the shoot. (1mk

v)Removing the leaves from the shoot (1mk

vi)Placing the set up in a cold room. (1mk

6. Name 2 products of anaerobic respiration in 10 plants.

(2mks)

i)

ii)

iii)

b) Give a reason why anaerobic respiration produces less energy.

(1mk)

c) Outline 2 ways in which anaerobic respiration is useful in industries.

i)

(2mks)

ii)

7. What is the respiratory quotient?

(1mk)

b) The equation below represents the oxidation of a certain food substrate.



i) Write an equation for calculating the respiratory quotient.

(1mk)

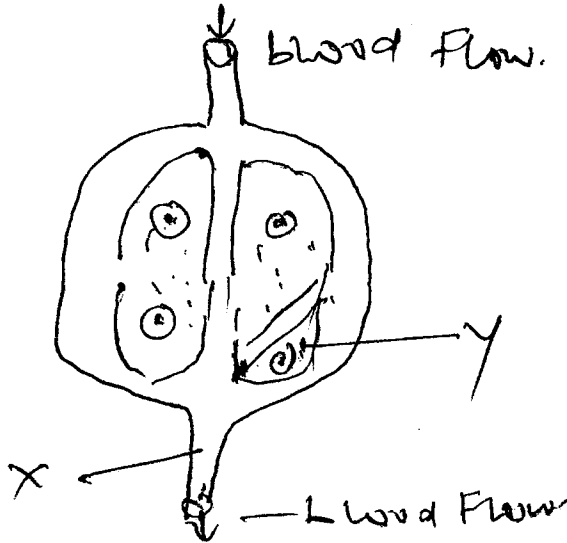
ii) Calculate the respiratory quotient for the above food substrate.

(2mks)

iii) Identify the food substrate respired.

(1mk)

8. The diagram below shows some capillaries in a tissue. Answer the questions that follow.



i) Is the blood vessel marked X an arteriole or a Venule?

(1mk)

ii) Name 2 substances that are found in blood and also in the fluid Y

(2mks)

i)

ii)

iii) Name one substance that leaves the cells to fluid Y _____ (1mk)

iv) What causes substances to leave blood and form part of liquid Y _____ (1mk)

v) How do useful substances in liquid Y get into the cells?

(1mk)