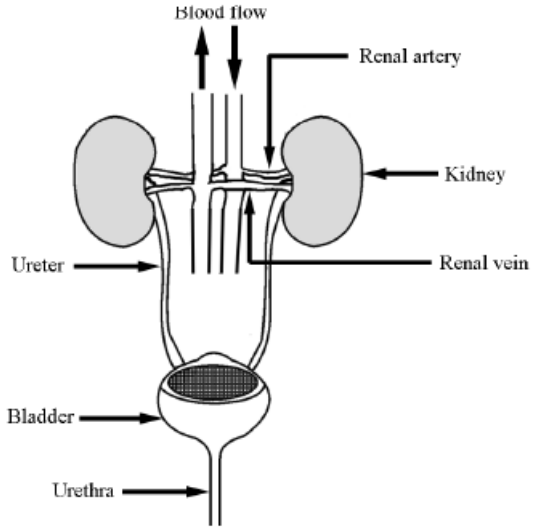
2nd Year Biology Revision Questions

The diagram is of the urinary system. Give the function of **five** of the six parts labelled. (15)



Renal artery _____

Kidney _____

Renal vein _____

Ureter _____

Bladder _____

Urethra _____

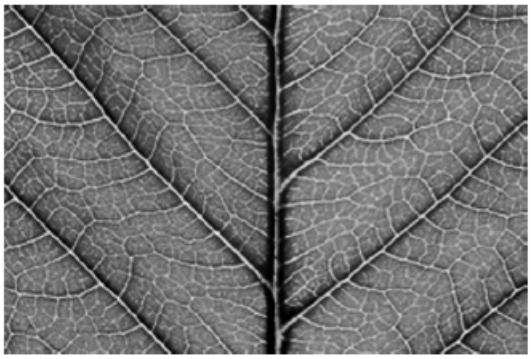
Why is blood considered to be a tissue?

Why? _____

Name a substance transported by blood.

Name _____

The photograph shows part of a leaf of a green plant.



(*i*) Name a gas that moves into and a gas that moves out of a green leaf during active photosynthesis. (6)

Gas in _____

_____

Gas out _____

(*ii*) Outline an experiment to show that photosynthesis produces starch. Use the box provided for an **optional** labelled diagram. (18)

_____

_____

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Without enzymes we would not be able to exist. Enzymes release energy from food, help build the molecules that our bodies are composed of and break down structures and wastes that we no longer need.

(*i*) Name an enzyme. (3)

Name _____

(*ii*) Name the substrate that the enzyme you have named acts on. (3)

Name _____

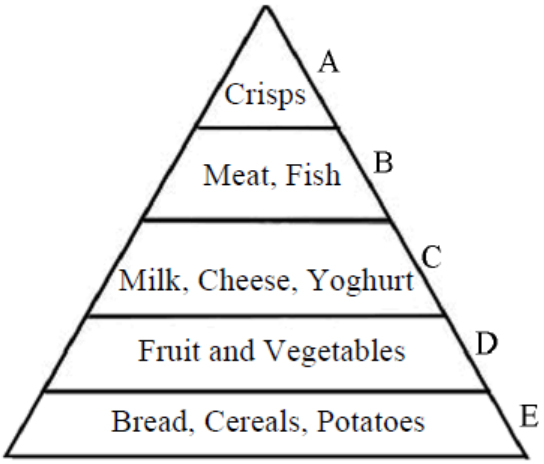
(*iii*) Name the product of the action of this enzyme. (3)

Name _____

(*iv*) What reagent might you use, in a laboratory, to test that the reaction has taken place? (3)

Name _____

The diagram is of a food pyramid.



(*i*) Name one other food from level **B**.

Food _____

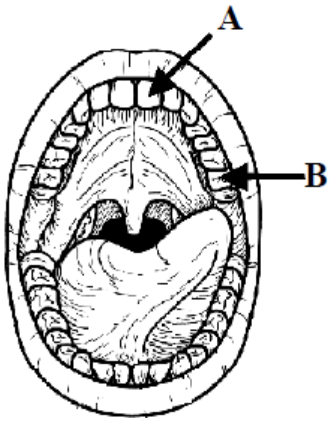
(*ii*) What is the dietary reason why the area of level **A** is much less than the area of level **E** in the food pyramid?

Why? _____

Complete the word equation for photosynthesis.

carbon dioxide + _____ ⟶ _____ + oxygen

The diagram shows the inside of a human mouth.
Give the name of tooth type **A**.

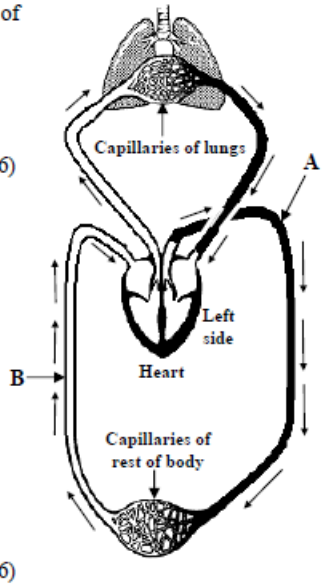


Name _____

What is the function of tooth type **B**?

Function _____

(*a*) The simplified diagram shows the flow of blood through the lungs, heart and the rest of the body.



(*i*) Name the blood vessels labelled **A** and **B**. (6)

A _____

B _____

Capillaries are small blood vessels.

(*ii*) Describe **two** changes in the composition of blood after it has passed through the capillaries of the lungs shown. (6)

1 _____

_____

2 _____

_____

What feature of capillaries allows these changes to happen? (3)

_____

(*iii*) Name the chamber of the heart that pumps blood to the lungs. (3)

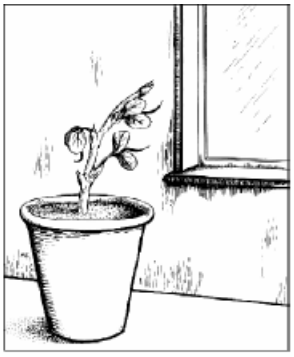
_____

Name **two** ***waste products*** that are excreted by our kidneys.

One _____

Two _____

A plant in an otherwise dark room bends towards the light from a window.



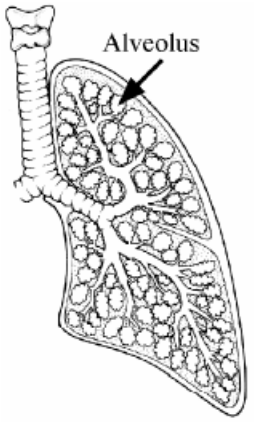
(*i*) What is the ***growth response*** of a ***plant to light*** called?

What? _____

(*ii*) What ***benefit*** does the plant get from this response?

What? _____

The diagram shows the internal structure of a human lung. There are about 350 million alveoli per lung.



Describe clearly the ***exchange of gases*** that occur between the ***air in the alveoli*** and the ***bloodstream***.

Describe _____

_____

_____

_____

_____

The diagram of the human digestive system has been simplified for clarity.

(*i*) What is ***digestion***? (3)

What? _____

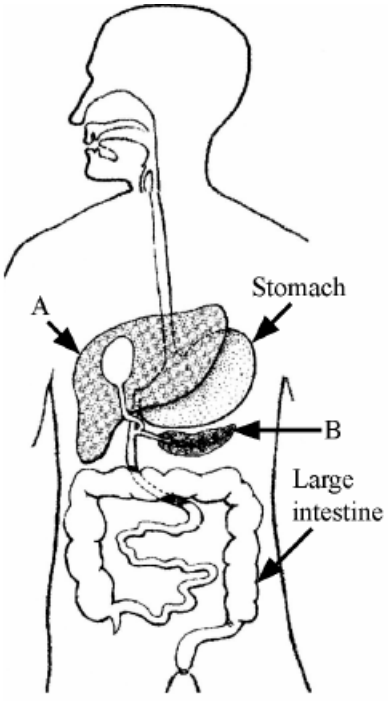
(*ii*) Why is ***digestion necessary***? (3)

Why? _____

(*iii*) Name the ***organs*** labelled **A** and **B**. (6)

Organ **A** _____

Organ **B** _____



(*iv*) Give **one *function*** of the stomach. (3)

Give _____

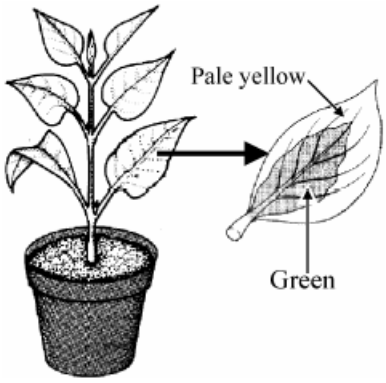
_____

(*v*) Give **one *function*** of the large intestine. (3)

Give _____

_____

The diagram shows a plant with variegated leaves i.e. the leaves have areas with different colours. The leaves of this plant have a green centre with pale yellow margins. This plant was used in an experiment to investigate the production of starch by photosynthesis.



(*i*) Why was the plant left in darkness for a day at the start of the experiment? (3)

Why? _____

_____

(*ii*) The plant was then exposed to bright light for some hours after which a leaf was removed and boiled in water for a few minutes.
Why was the leaf boiled in water? (3)

Why? _____

(*iii*) Draw a labelled diagram, in the box, showing the apparatus and named liquid used to remove the green pigment from the leaf. (6)

(*iv*) The leaf was finally covered with a solution that turned the area which was previously green to blue-black while the leaf margins did not turn blue-black.
Name the solution used. (3)

Name _____

(*v*) Suggest a reason why the leaf margins did not turn blue-black. (3)

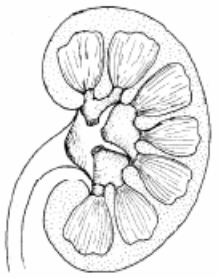
Suggest _____

Name ***two processes*** that the ***leaves*** of ***green plants*** carry out.

(*i*) _____

(*ii*) _____

(*i*) Name the ***organ*** shown in the diagram.

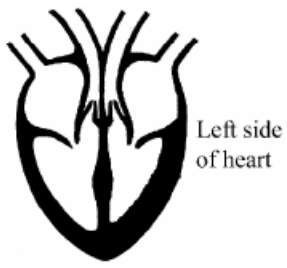


Name _____

(*ii*) Give the ***function*** of the organ shown.

Function _____

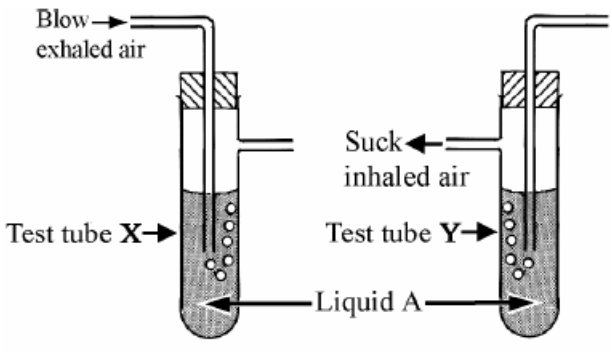
Label clearly the ***pulmonary artery with an*** **A**, and the ***pulmonary vein with a*** **V** in the diagram of the heart.



The diagram shows the apparatus used by a pupil when performing an experiment in a school laboratory.

The pupil blew (exhaled) air into test tube **X**.

The pupil sucked (inhaled) air from test tube **Y**.



The pupil continued, alternately, blowing and sucking air, as above, until ***liquid*** **A** in ***one*** of the test tubes ***turned milky***.

(*i*) Name ***liquid* A**. (3)

Name _____

(*ii*) In ***which test tube***, **X** or **Y**, did the ***liquid turn milky***? (3)

Which? _____

(*iii*) Why did ***liquid* A *turn milky*** in ***one*** of the test tubes? (3)

Why? _____

(*iv*) What ***conclusion*** can be made from the ***result of this experiment*** regarding the ***difference in composition between exhaled and inhaled air***? (3)

Conclusion? _____

(*v*) Complete the ***word equation***, below, for ***aerobic respiration***. (6)

Food + _____ ⟶ _____ + energy + water