



# BIOLOGY

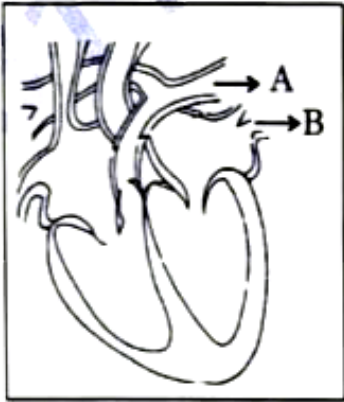
## BOOKS - X BOARDS

### QUESTION PAPER 2022 TERM1

#### Section A

1. Consider the following statements in connection with the functions of the blood vessels marked A and B in the diagram of a

human heart as shown.



(i) Blood vessel A - It carries carbon dioxide rich blood to the lungs.

(ii) Blood vessel B - It carries oxygen rich blood from the lungs.

(iii) Blood vessel B - Left atrium relaxes as it receives blood from this blood vessel

(iv) Blood vessel A - Right atrium has thick muscular wall as it has to pump blood to this

blood vessel

The correct statements are

- A. (i) and (ii) only
- B. (ii) and (iii) only
- C. (ii), (iii) and (iv)
- D. (i), (ii) and (iii)

**Answer:**



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2. In living organisms during respiration which of the following products are not formed if oxygen is not available ?

- A. Carbon dioxide + water
- B. Carbon dioxide + Alcohol
- C. Lacti acetic + Alcohol
- D. Carbon dioxide + Lactic Acid

**Answer:**



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**3.** The correct statements with reference to single celled organisms are

(i) Complex substances are not broken down into simpler substances.

(ii) Simple diffusion is sufficient to meet the requirement of exchange of gases.

(iii) Specialised tissues perform different functions in the organisms.

(iv) Entire surface of the organism is in contact with the environment for taking in food.

A. (i) and (iii)

B. (ii) and (iii)

C. (ii) and (iv)

D. (i) and (iv)

**Answer:**



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4. Which one among the following is not removed as a waste product from the body of a plant ?

A. Resins and Gums

B. Urea

C. Dry Leaves

D. Excess Water

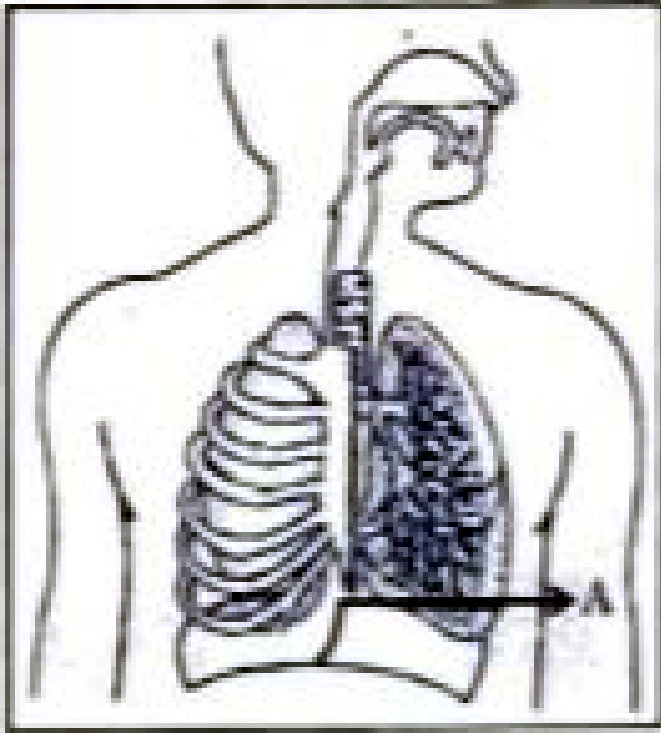
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5. Which of the following statements are correct in reference to the role of A (shown in the given diagram) during a breathing cycle in

human beings ?



(i) It helps to decrease the residual volume of air in lungs.

(ii) It flattens as we inhale.

(iii) It gets raised as we inhale.

(iv) It helps the chest cavity to become larger.



A. (ii) and (iv)

B. (iii) and (iv)

C. (i) and (ii)

D. (i), (ii) and (iv)

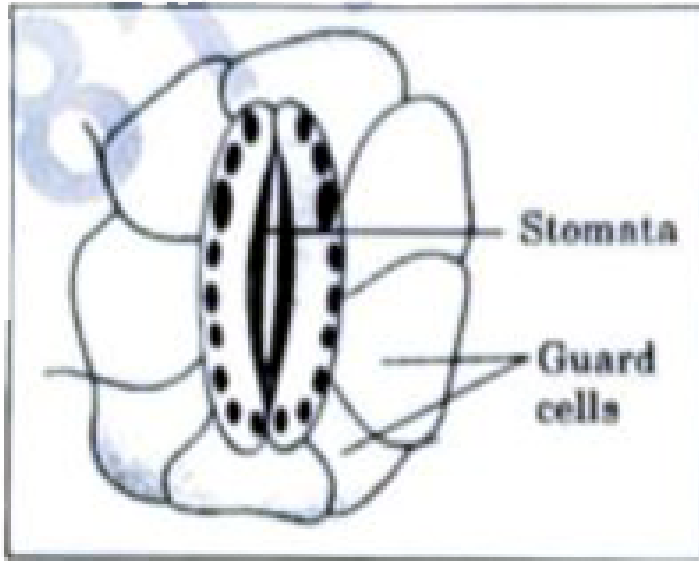
**Answer:**



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6. Which one of the following conditions is true for the state of stomata of a green leaf

shown in the given diagram ?



- A. Large amount of water flows into the guard cells.
- B. Gaseous exchange is occurring in large amount.

C. Large amount of water flows out from the guard cells.

D. Large amount of sugar collects in the guard cells.

**Answer:**



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**Section B**

1. Assertion (A) : Nitrogen is an essential element for plant growth and is taken up by plants in the form of inorganic nitrates or nitrites.

Reason (R) : The soil is the nearest and richest source of raw materials like Nitrogen, Phosphorus and other minerals for the plants.

A. Both (A) and (R ) are true (R ) is the correct explanation of (A).

B. Both (A) and (R ) are true but (R ) is not the correct explanation of (A).

C. (A) is true, but (R) is false.

D. (A) is false, but (R) is true.

**Answer:**



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**2. Assertion (A) :** Hydrochloric acid helps in the digestion of food in the stomach.

**Reason (R) :** Hydrochloric acid creates an acidic

medium to activate protein digesting enzymes.

A. Both (A) and (R ) are true (R ) is the correct explanation of (A).

B. Both (A) and (R ) are true but (R ) is not the correct explanation of (A).

C. (A) is true, but (R) is false.

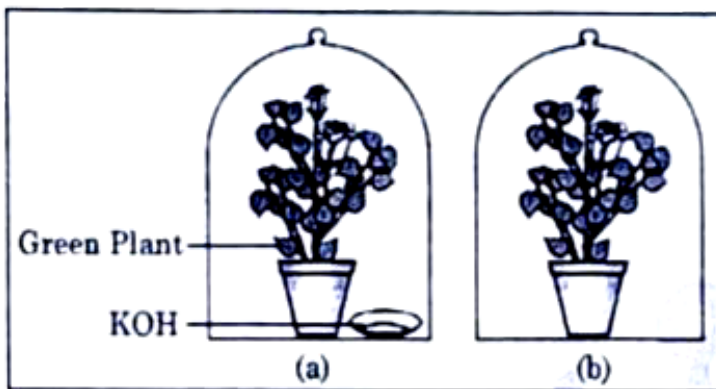
D. (A) is false, but (R) is true.

**Answer:**



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3. A student was asked to write a stepwise procedure to demonstrate that carbon dioxide is necessary for photosynthesis. He wrote the following steps. The wrongly worded step is



A. Both potted plants are kept in dark room for at least three days.

B. Bottom of the bell jars is sealed to make them air tight

C. Both potted plants are kept in sunlight after the starch test.

D. A leaf from both the plants is taken to test the presence of starch.

**Answer:**

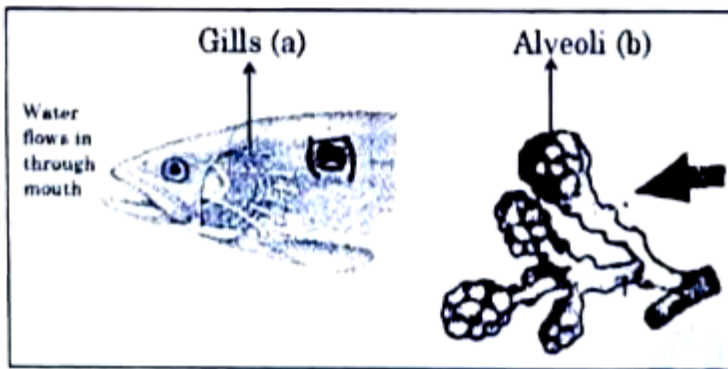


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4. Respiratory structures of two different animals—a fish and a human being—are as shown.

Observe (a) and (b) and select one characteristic that holds true for both of them.



A. Both are placed internally in the body of animal.

B. Both have thin and moist surface for gaseous exchange.

C. Both are poorly supplied with blood vessels to conserve energy.

D. In both the blood returns to the heart after being oxygenated.

**Answer:**



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5. The length of small intestine in a deer is more as compared to the length of small intestine of a tiger. The reason for this is

A. Mode of intake of food.

B. Type of food consumed.

C. Presence or absence of villi in intestines.

D. Presence or absence of digestive enzymes

**Answer:**



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6. Identify the two components of Phloem tissue that help in transportation of food in plants.

- A. Phloem parenchyma & sieve tubes
- B. Sieve tubes & companion cells
- C. Phloem parenchyma & companion cells
- D. Phloem fibres and sieve tubes

**Answer:**

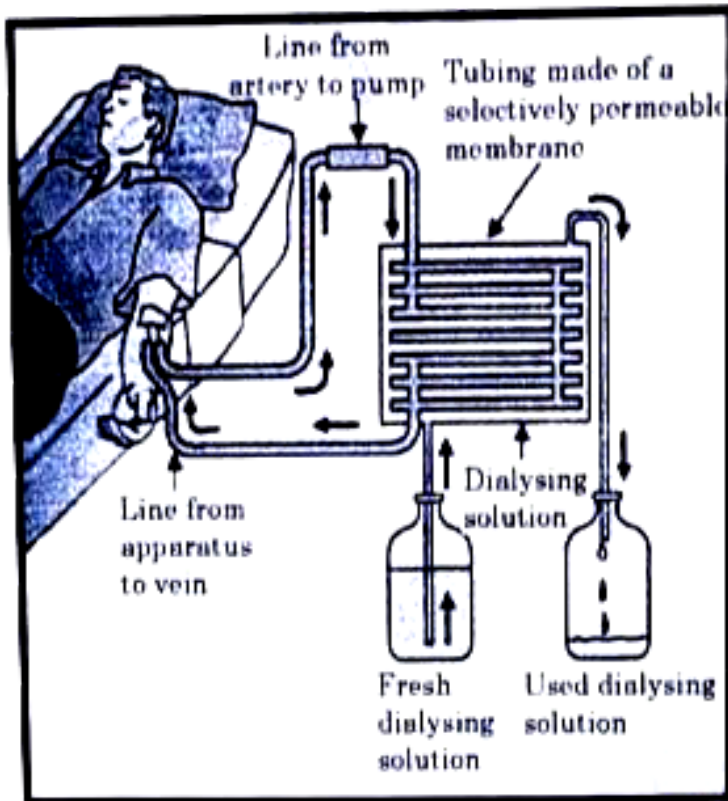


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## Section C

1. The figure shown below represents a common type of dialysis called as Haemodialysis. It removes waste products from the blood. Such as excess salts, and urea which are insufficiently removed by the kidney in patients with kidney failure. During the

procedure, the patient's blood is cleaned by filtration through a series of semi-permeable membranes before being returned to the blood of the patient. On the basis of this, answer the following questions:



The haemodialyzer has semi-permeable lining of tubes which help to:

- A. To maintain osmotic pressure of blood.
- B. To filter nitrogenous wastes from the dialyzing solution.
- C. In passing the waste products in the dialyzing solution.
- D. To pump purified blood back into the body of the patient.

**Answer:**

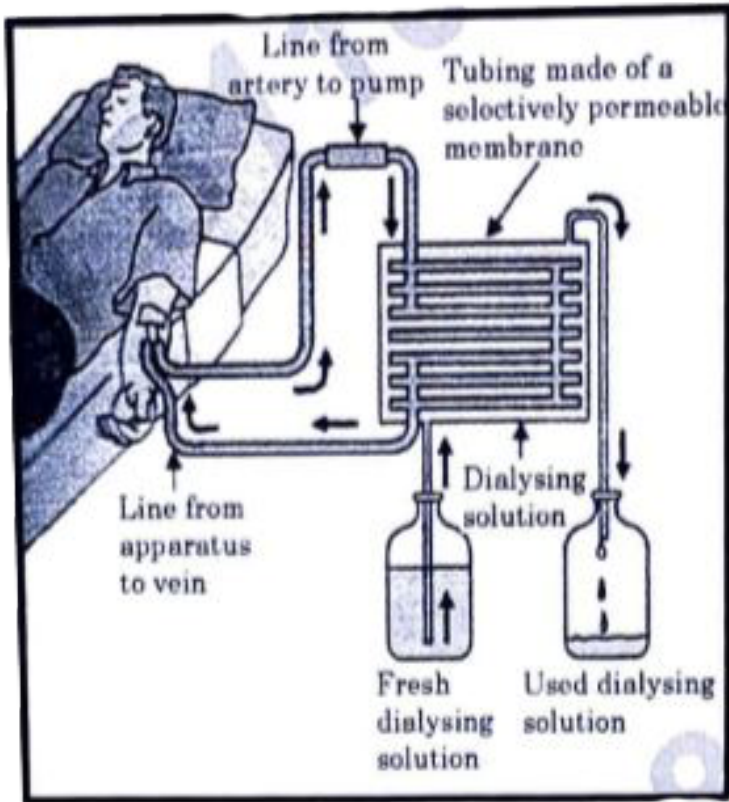


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2. The figure shown below represents a common type of dialysis called as Haemodialysis. It removes waste products from the blood. Such as excess salts, and urea which are insufficiently removed by the kidney in patients with kidney failure. During the procedure, the patient's blood is cleaned by filtration through a series of semi-permeable membranes before being returned to the blood of the patient. On the basis of this,



answer the following questions:



Which one of the following is not a function of Artificial Kidney?

- A. To remove nitrogenous wastes from the blood.

B. To remove excess fluids from the blood.

C. To reabsorb essential nutrients from the blood.

D. To filter and purify the blood.

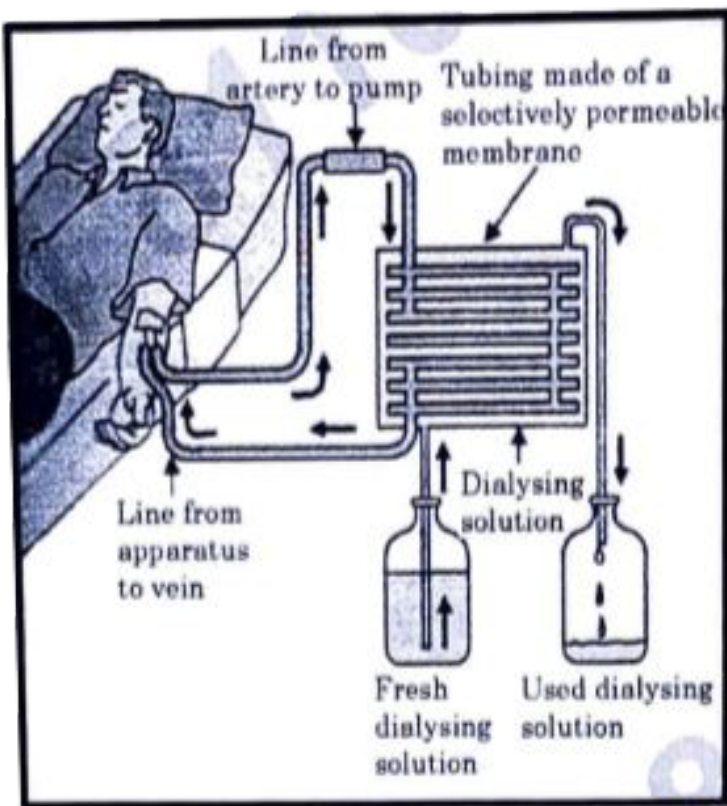
**Answer:**



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from the blood. Such as excess salts, and urea which are insufficiently removed by the kidney in patients with kidney failure. During the procedure, the patient's blood is cleaned by filtration through a series of semi-permeable membranes before being returned to the blood of the patient. On the basis of this, answer the following questions:



The 'used dialysing' solution is rich in,

- A. Urea and excess salts
- B. Blood cells
- C. Lymph

## D. Proteins

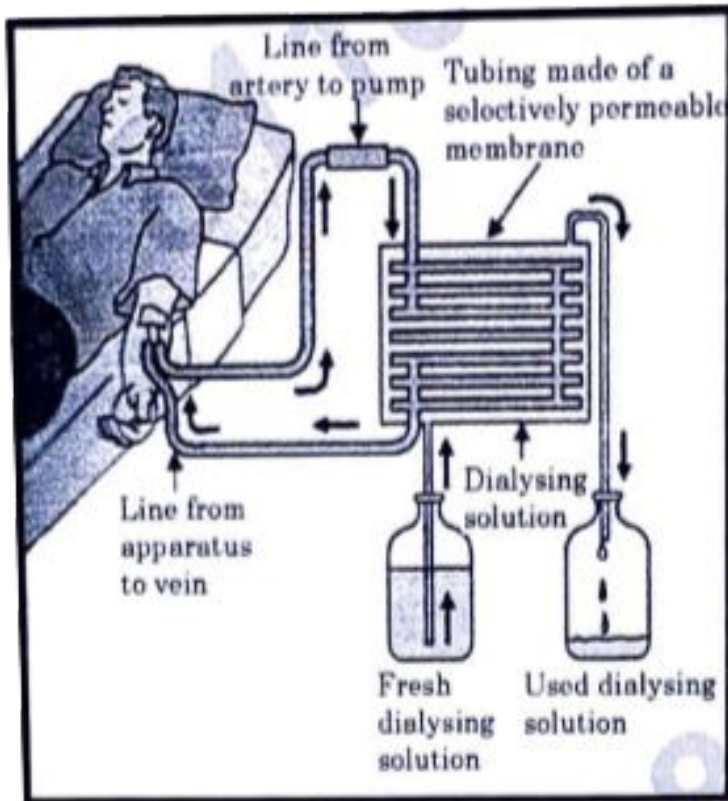
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4. The figure shown below represents a common type of dialysis called as Haemodialysis. It removes waste products from the blood. Such as excess salts, and urea which are insufficiently removed by the kidney in patients with kidney failure. During the

procedure, the patient's blood is cleaned by filtration through a series of semi-permeable membranes before being returned to the blood of the patient. On the basis of this, answer the following questions:



Which part of the nephron in human kidney, serves the function of reabsorption of certain substances?

- A. Glomerulus
- B. Bowmans Capsule
- C. Tubules
- D. Collecting duct

**Answer:**



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