



BIOLOGY

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TRANSPORTATION IN PLANTS

Text Evaluation Choose The Best Answer

1. Active transport involves

A. movement of molecules from lower to

higher concentration

B. expenditure of energy

C. It is an uphill task

D. all of the above

Answer: D

2. Water which is absorbed by roots is transported to aerial parts of the plant through

A. Cortex

B. epidermis

C. Phloem

D. xylem

Answer: D

3. During transpiration there is loss of

A. carbon dioxide

B. Oxygen

C. Water

D. None of the above

Answer: C

4. Root hairs are

A. Cortical cell

B. projection of epidermal cell

C. unicelluar

D. both (a) and(C)

Answer: D

5. Which of the following process requires energy?

A. Active transport

B. diffusion

C. osmosis

D. all the them

Answer: A

6. The wall of human heart is made of

A. Endocardium

B. epicardium

C. myocardium

D. all of the above

Answer: D



7. Which is the sequence of correct blood flow

A. Ventricle - atrium - vein - arteries

B. Atrium - ventricle - veins - arteries

C. Atrium - ventricle -arteries - vein

D. Ventricles - vein - atrium - arteries

Answer: C

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8. A patient with blood group O was injured in an accident and has lost . Which blood group

the doctor should effectively use for

transfusion in this condition ?

A. O group

B. AB group

C. A or B group

D. All blood group

Answer: A

9. Heat ' of heart' is called

A. S A node

B. AV node

C. Pukinje fibres

D. Bundle of his

Answer: A

10. Which one of the following regarding blood composition is correct

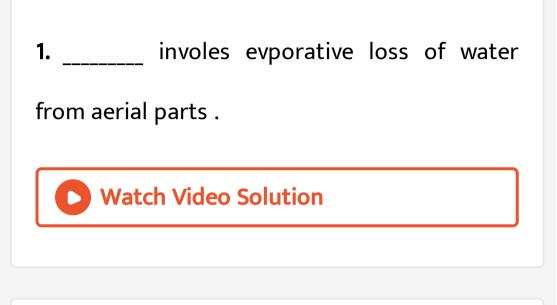
A. Plasma - blood + Lymphocyte

B. Serum - blood + fibrinogen

C. Lymph -Plasma +RBC +WBC

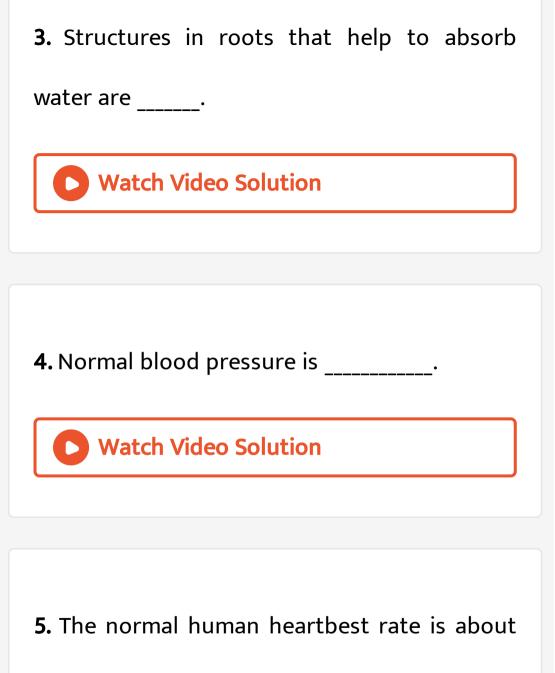
D. Blood -plasma +RBC +WBC +platelets

Answer: D



2. Water enters the root cell through a ____

plasma membrane .



____ times per minute .

Text Evaluation Match The Following

1. Match the following columns

	Column I		Column II
Α	Symplastic pathway	(i)	Leaf
В	Transpiration	(ii)	Plasmodesmata
С	Osmosis	(iii)	Pressure in xylem
D	Root Pressure	(iv)	Pressure gradient

Column I		Column II	
Α	Leukemia	(i)	Thrombocytes
В	Platelets	(ii)	Phagocyte
С	Monocytes	(iii)	Decrease in leucocytes

2.

D	Leucopenia	(iv)	Blood Cancer
E	AB blood group	(v)	Allergic condition
F	O blood group	(vi)	Inflammation
G	Eosinophil	(vii)	Absence of antigen
Н	Neutrophils	(viii)	Absence of antibody

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Text Evaluation State Whether True Or False If False Write The Correct Statement

The phloem is responsible for the translocation of food.
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2. plants lose water by the process of transpiration .

-

3. The form of sugar transported through the

phloem is glucose.

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4. In apopastic movement the water travels

through the cell membrane and entre the cell .

5. When guard cells lose water the stoma opens

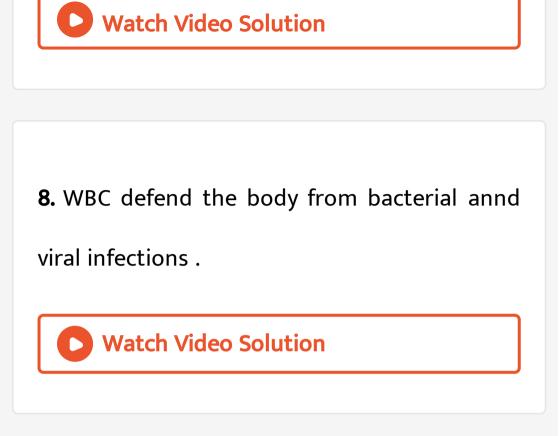
• Watch Video Solution

6. Initiation and stimulation of heat beat take

place by nerves .

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7. All veins carry deoxygented bold .



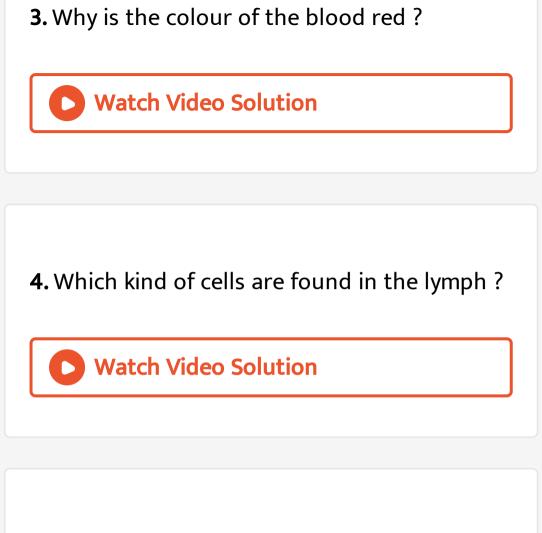
9. The closure of the mittal and tricuspid valves at the start of the ventricular systole produces the first sound 'LUBB'

Text Evaluation Answer In A Word Or Sentence

 Name two layered protective covering of human heart.

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2. What is the shape of RBC in human blood?



5. Name the heart valve associated with the

major arteries leaving the ventricles.

6. Mention the arery which supplies blood to

the heart muscle .

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Text Evaluation Short Answer Questions

1. What causes the opening and closing of

guard cells of stomata during transpiration?

2. What is cohesion ?



3. Trace the pathway followed by water molecules from the time it enters a plant root to the time it escapes into the atmosphere from a leaf.

4. What would happen to the leaves of a plant

that transpires more water than its

absorption in the roots ?



5. Describe the structure and working of the

human heart.



6. Why is the circulation in man referred to as

double circulation ?

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7. What is are heat sounds ? How are they produced ?



8. What is the importance of values in the

heart ?

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9. Who discovered RH factor ? Why was it named so ?

10. How are arteries and veins structuarly

different from one another ?



11. Why is the sinoatrial node called the

pacmaker of heart ?



12. Differntiate between systemic circulationn

and pulmonary circulation ?

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13. The complete events of cardiac cycle last

for 0.8 sec . What is the timing for each event ?

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Text Evaluation Give Reasons For The Following Statements Minerals cannot be passively absorbed by the roots .
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2. Guard cells are responsible for opening and

closing of the stomata



3. The movement of substances in the phloem

can be in any direction .

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4. Minerals in the plants are not lost when the

leaf falls .



5. The walls of the right ventricle are thicker

than the right auricles .

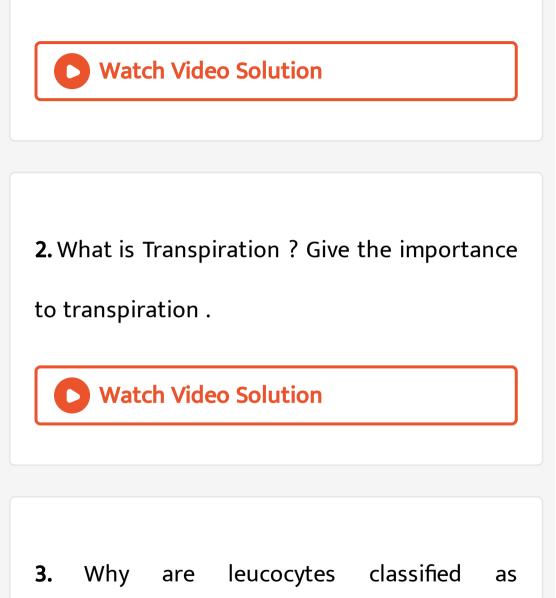
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6. Mature RBC in mammals do not have cell organelles .

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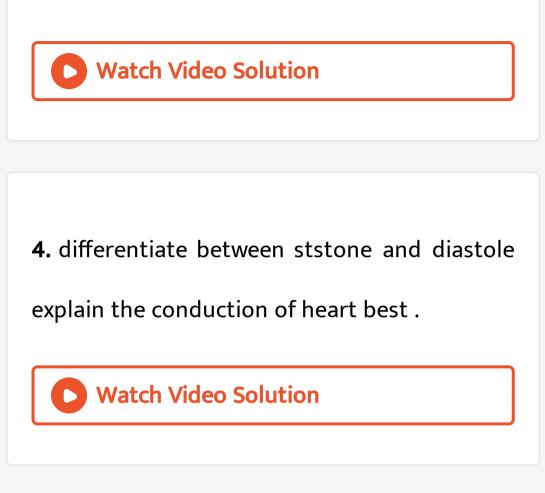
Text Evaluation Long Answer Question

1. How do plants absorb water? Explain .



granulocytes and agranulocytes? Name each

cell and mention its functions.



5. Enumerate the function of blood .

 Assertion : RBC plays an important role in the transport of respiratory gases.
 Reason : RBC do not have cell organells and nucleus.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the

correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer:

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2. Assertion: Persons with AB blood group are called an universal recipients, because they can receive blood from all groups.
Reason: Antibodies are absent in persons with AB blood group.

A. If both A and R are true and R is correct

explanation of A

B. If both A and R are true but R is not the

correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer:

1. When any dry plant material is kept in water

, they swell up . Name and define the

phenomenon involved in this change.

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2. Why are the walls of the left ventricle thicker

than the other chambers of the heart?

3. Doctors use stethoscope to hear the the

sound of the heart . Why?

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4. How does the pulmonary artery and pulmonary vein differ in their function when compared to a normal artery and vein ?



5. Transpiration is a necessary evil in plants

Explain .

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Other Important Questions Answers Choose The Correct Answer

1. Seed swells when placed in water due to:

A. osmosis

B. imbibition

C. hydrolysis

D. all of these

Answer: B



2. Root hairs occurs in:

A. Meristematic zone

B. Cell elongation zone

C. Cell maturation zone

D. Old root

Answer: C

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3. Water in plants is transported by ascent of sap takes place through:

A. cambium

B. xylem

C. phloem

D. epidermis

Answer: B

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4. Absorption of water is increased when:

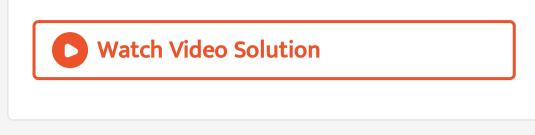
A. transpiration is increased

B. photosynthesis is increased

C. respiration is increased

D. root pressure is increased

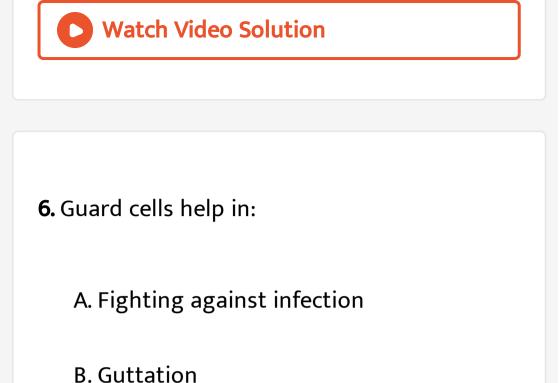




5. Opening of stomata is due to:

- A. Turgidity of guard cells
- B. Size of guard cells
- C. Number of guard cells
- D. Amount of CO_2 in the atmosphere

Answer: A



- C. Protecting against grazing.
- D. Transpiration

Answer: D

7. Photosynthetic food material is transported

in the form of:

A. Glucose

B. Sucrose

C. Starch

D. Fructose

Answer: B

8. Coronary artery supplies blood to:

A. Mammary glands

B. Rib muscles

C. Skin

D. Heart

Answer: D



9. All arteries carry oxygenated blood except:

A. systematic

B. hepatic

C. pulmonary

D. cardiac

Answer: C



10. The colour of lymph is:

A. white

B. pale yellow

C. colourless

D. milky

Answer: C



11. An artery can be distinguished from a vein in having:

A. thicker wall

B. elastic vessels

C. no valves

D. all of the above

Answer: D

12. Purkinje fibres mainly help in contraction of:

A. right auricle

B. left auricle

C. ventricles

D. Aorta

Answer: C

13. The 'Lubb' and 'Dupp heart sound are due to:

A. opening of heart valves

B. action of papillary muscles

C. closing of heart valves

D. activity of pace maker

Answer: C

14. The closed circulatory system occurs in:

A. cockroach

B. fish

C. mosquito

D. House fly

Answer: B



15. Normal pulse rate is:

A. 80 mm Hg

B. 120 mm Hg

C. 40 mg Hg

D. 90 mm Hg

Answer: D

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16. In the ABO system of blood groups, if both antigens are present but no antibody, the

blood group of the individual would

be.....

A. B

B. O

C. AB

D. A

Answer: C



17. Arteries are branches of:

A. capillaries

B. veins

C. aorta

D. none of these

Answer: C

18. Which type of WBCs are found in maximum number?

A. Monocytes

B. Basophils

C. Eosinophils

D. Neutrophils

Answer: D

19. Which of the following are granular WBCs?

A. Neutrophils, Basophils, Lymphocytes

- B. Eosinophil, Basophil, Monocytes
- C. Basophils, Monocytes, Lymphocytes
- D. Neutrophils, Eosinophil, Basophil

Answer: D

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20. RBCs are concerned with carriage of

gases.

A. CO_2

 $\mathsf{B.}\,O_2$

C. Respiratory

 $\mathsf{D}. CO_2$ and SO_2

Answer: C

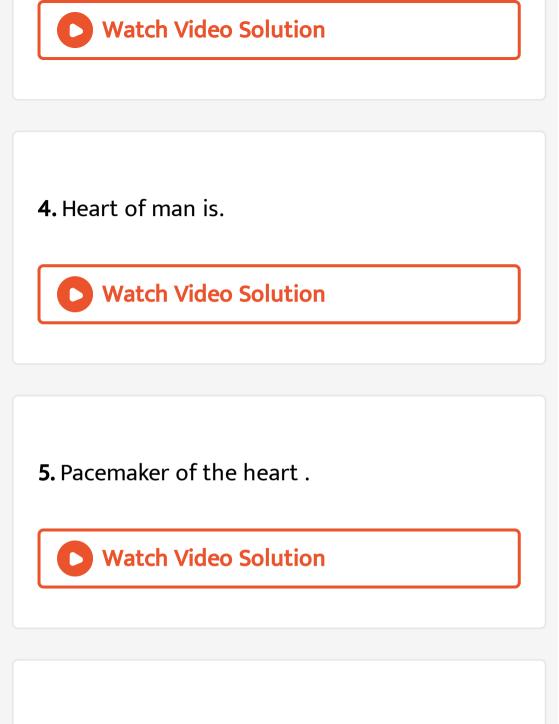
1. The contraction of the heart is called____

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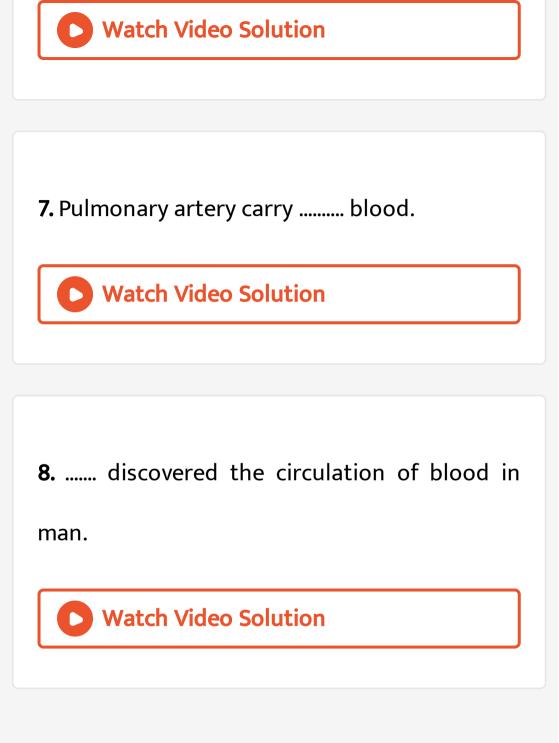
2. Oxygenated blood is carried by



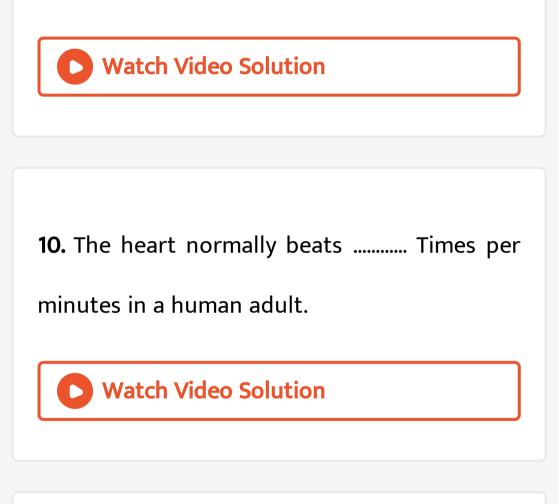
3. Sphygmomanometer measures



6. What is the life span of RBC in humans?



9. Semilunar valve is present at the base of



11. Red blood pigment is

12. Transpiration helps in the absorption and

..... movement of water and minerals.



13. Water in plants is transported by ascent of

sap takes place through



14. The absorption water due to expenditure

of energy is called

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15. In plants, the translocation of organic solutes takes place through

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Other Important Questions Answers Match The Following

	Column I		Column II
А	Superior vena cava	(i)	carries deoxygenated blood

1.

В	Inferior vena cava	(ii)	Carries oxygenated blood from lungs
С	Pulmonary Artery	(iii)	Brings deoxygenated blood from lower parts of body to right atrium
D	Pulmonary vein	(iv)	Brings deoxygenated blood from upper parts of body into right atrium.



2. Match the following columns

Column I		Column II		
А	Blood	(i)	Carry respiratory gases	
В	WBC	(ii)	Lubb - Dupp	
С	RBC	(iii)	Phagocytosis	
D	Capillary	<i>(iv)</i>	Connective tissue	
Ε	Heart beat	. (v)	Tiny blood vessel	





1. The human heart beats 72 times per minute.



2. State True or False:Right half of heart

receives and pumps off oxygenated blood.

3. Between right auricle and right ventricle seen Mitral valve

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4. The force of attraction between the molecules of companion cells is called cohesion.

5. By passive transport sucrose moves into the

cells where it is utilised or stored

Watch	Video	Sol	ution
, vvalli	VIUCU	201	uliuli

Other Important Questions Answers Creative Question

1. Origin of heart beat and its conduction is represented by:

A. AV node \rightarrow Bundle of His \rightarrow SA node

 \rightarrow Purkinje fibres

B. SA node \rightarrow Purkinje fibres \rightarrow AV node

 \rightarrow Bundle of His

C. Purkinje fibres \rightarrow Purkinje node \rightarrow AV

fibres \rightarrow Bundle of His

D. SA node \rightarrow AV node \rightarrow Bundle of His

 \rightarrow Purkinje fibres

Answer:

2. The cardiac pacemaker in a patient fails to function normally. The doctor finds that an artificial pacemaker is to be grafted in him. It is likely that it will be drafted at the site of.

- A. Purkinje system
- B. Sinu atrial node
- C. Atrio ventricular node
- D. Atrio ventricular bundle

Answer:



3. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when:

A. AV node receives signal from SA node

B. AV valves open up

C. Ventricular walls vibrate due to rushing

in of blood from atria

D. Semi lunar valves close down after the

blood flows into vessels from ventricles

Answer:

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Other Important Questions Answers Assertion And Reason

1. Assertion: RBC impart red colour to the blood due to the presence of respiratory

pigment haemoglobin.

Reason: The young RBC contain nucleus in man.

A. If both the assertion and the reason are true and the reason is the correct explanation of assertion.

B. If both the assertion and the reason are

true, but the reason is not the correct

explanation of the assertion.

C. Assertion is true, but the reason is false.

D. Assertion is false, but the reason is true

Answer:

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2. Assertion: Osmosis is the movement of solvent molecule from higher concentration to lower concentration.

Reason: Osmosis is the active movement of water.

A. If both the assertion and the reason are true and the reason is the correct explanation of assertion. B. If both the assertion and the reason are true, but the reason is not the correct explanation of the assertion.

C. Assertion is true, but the reason is false.

D. Assertion is false, but the reason is true

Answer:



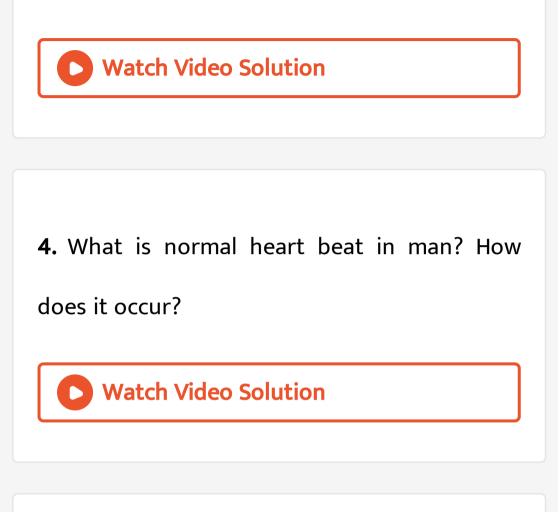
Other Important Questions Answers Answer In A Sentence

1. Name the components of circulatory system.

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2. What is the role of valves in heart?

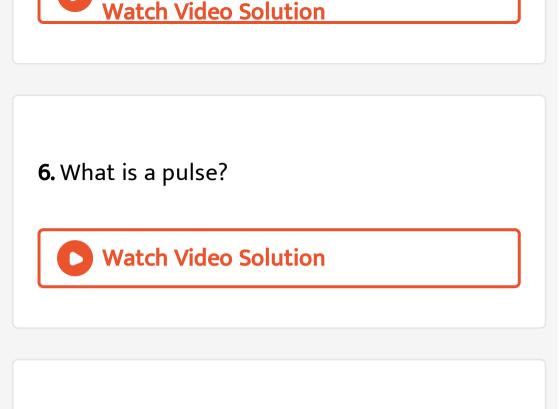
3. Mention the composition of plasma.



5. Why are auricles and ventricles separated by

auricular and ventricular septum?



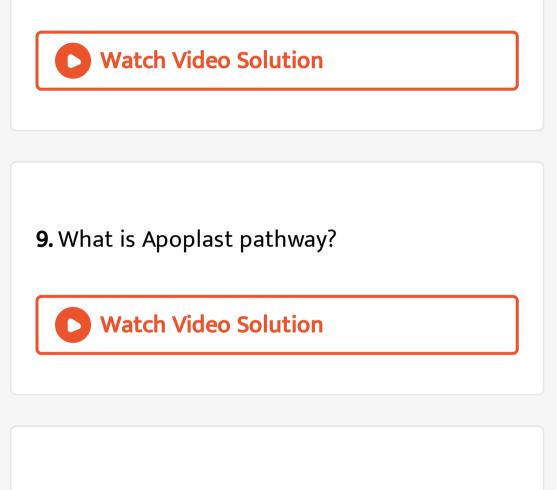


7. The instruments used to measure blood

pressure is

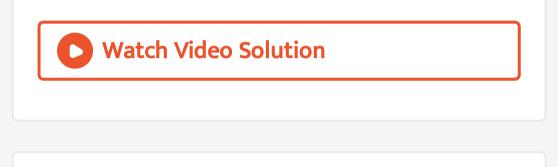
8. Which blood group is called as "Universal

Donor and 'Universal Recipient'.



10. What is transpiration pull ?

11. When does plasmolysis occur?

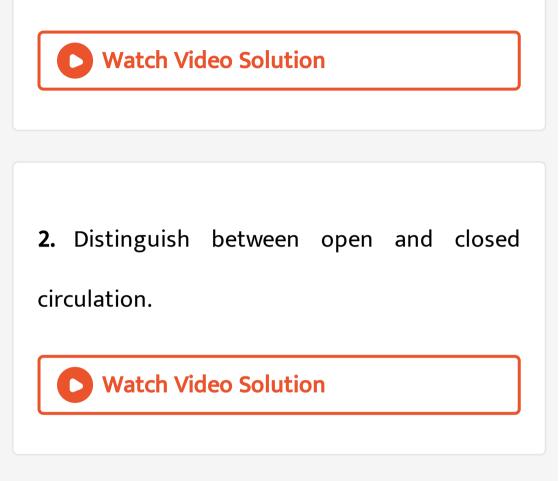


12. What is adhesion?

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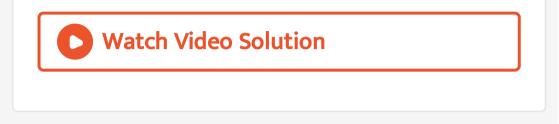
Other Important Questions Answers Short Answer Question

1. Define blood pressure .



3. Explain the phenomenon of Guttation.

4. What is Coronary circulation?



Other Important Questions Answers Long Answer Question

1. What is lymph? Write its function.

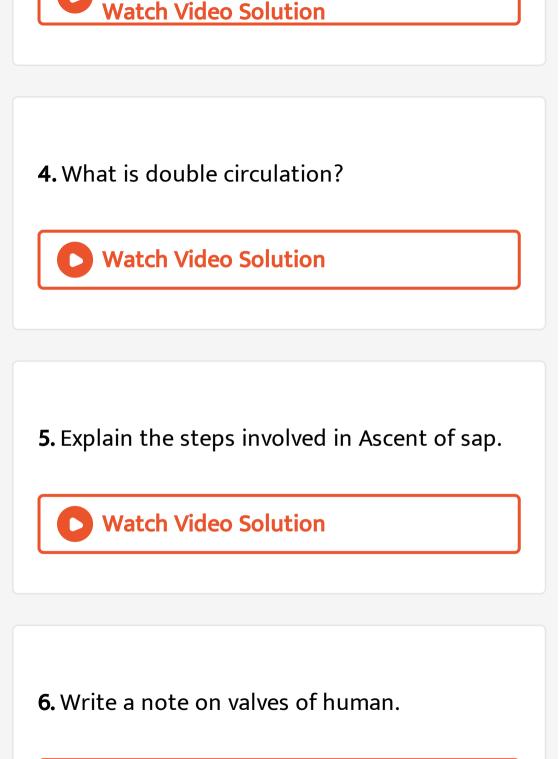
2. Explain the cardiac cycle.



3. Demonstration of Osmosis:

A thistle funnel whose mouth is covered with a semipermeable membrane, is filled with sucrose solution. It is kept inverted in a beaker containing water. The water will diffuse across sugar the membrane due to osmosis and raise the level of the solution solution in the funnel.







Other Important Questions Answers Higher Order Thinking Skills Hots

1. An unconscious patient is rushed into the emergency room and needs a fast blood transfusion. Because there is no time to check her medical history or determine her blood type,which type of blood should you as her doctor, give her ? 2. The cardiac pacemaker in a patient fails to function normally. The doctor finds that an artificial pacemaker is to be grafted in him. It is likely that it will be drafted at the site of.

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3. Water vapour comes out from the plant leaf through the stomatal opening. Through the same stomatal opening carbon dioxide diffuses into the plant during photosynthesis. Reason out the above statements using one of

the following options:



4. Removal of ring wood of tissue outside the

vascular cambium from the tree trunk kills it

because:



Other Important Questions Answers Give Reason

1. Valves are important in human heart. Give

reason.

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2. During rainy season wooden door generally

swells up - Give reason.



3. Para sympathetic neural signals affects the

working of the heart. Give reason.



4. Grapes placed in salt solution shrink. Give

reason.



5. Why WBC's are known as phagocytes?

