BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

TRANSPORTATION IN PLANTS AND CIRCULATION IN ANIMALS

Textbook Evaluation Questions Solved Choose The Correct 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:

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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:

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3. During transpiration there is loss of

A. carbon dioxide

B. oxygen

C. water

D. none of the above

Answer:

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4. Root hairs are

A. cortical cell

B. projection of epidermal cell

C. unicellular

D. both b and c

Answer:

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5. Which of the following process requires energy ?

A. active transport

B. diffusion

C. osmosis

D. all of them

Answer:

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6. The wall of human heart is made of

A. Endocardium

B. Epicardium

C. Myocardium

D. All of the above

Answer:

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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:

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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:

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9. Heat ' of heart' is called

A. SA node

B. AV node

C. Purkinje fibres

D. Bundle of His

Answer:

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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:

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Textbook Evaluation Questions Solved Fill In The Blanks

1. _____ involes evporative loss of water from aerial parts .

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2. Water enters the root cell through a _____ plasma membrane .

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3. Structures in roots that help to absorb water are _____.

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4. Normal blood pressure is _____.

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5. The normal human heartbest rate is about _____ times per minute .

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Textbook Evaluation Questions Solved Match The Following

1. Match the following -Section I

1. Symplastic pathway	–	(a) Leaf
2. Transpiration	–	(b) Plasmodesmata
3. Osmosis	–	(c) Pressure in xylem
4. Root Pressure	–	(d) Pressure gradient

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2. Match the following terms with their respective meanings - Section II

1. Leukemia	–	(*a*) Thrombocytes
2. Platelets	–	(*b*) Phagocyte
3. Monocytes	–	(*c*) Decrease in leucocytes
4. Leucopenia	–	(*d*) Blood Cancer
5. AB blood group	–	(*e*) Allergic condition
6. O blood group	–	(*f*) Inflammation
7. Eosinophil	–	(*g*) Absence of antigen
8. Neutrophils	–	(*h*) Absence of antibody

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Textbook Evaluation Questions Solved State Whether True Or False If False Write The Correct Statement

1. The phloem is responsible for the translocation of food .

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2. Plants lose water by the process of transpiration.

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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 .

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5. When guard cells lose water the stoma opens

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6. Initiation and stimulation of heat beat take place by nerves .

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7. All veins carry deoxygented bold .

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8. WBC defend the body from bacterial annd viral infections .

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

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Textbook Evaluation Questions Solved Answer In A Word Or Sentence

1. Name two layered protective covering of human heart .

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

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3. Why is the colour of the blood red ?

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4. Which kind of cells are found in the lymph ?

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5. Name the heart valve associated with the major arteries leaving the ventricles.

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6. Mention the arery which supplies blood to the heart muscle .

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Textbook Evaluation Questions Solved Short Answer Question

1. What causes the opening and closing of guard cells of stomata during transpiration?

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2. What is cohesion?

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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.

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4. What would happen to the leaves of a plant that transpires more water than its absorption in the roots ?

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5. Describe the structure and working of the human heart .

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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 ?

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8. What is the importance of values in the heart ?

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

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10. How are arteries and veins structuarlly different from one another ?

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11. Why is the sinoatrial node called the pacmaker of heart ?

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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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Textbook Evaluation Questions Solved Give Reasons For The Following Statements

1. Minerals cannot be passively absorbed by the roots .

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2. Guard cells are responsible for opening and closing of the stomata

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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 .

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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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Textbook Evaluation Questions Solved Long Answer Questions

1. How do plants absorb water? Explain .

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2. What is transpiration?

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3. Why are leucocytes classified as granulocytes and mention its functions .

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4. differentiate between ststone and diastole explain the conduction of heart best .

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5. (a) Write a note on euploidy.

(b) Enumerate the functions of blood.

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Textbook Evaluation Questions Solved Assertion And Reasoning

1. 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:

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Textbook Evaluation Questions Solved Higher Order Thinking Skills Hots

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?

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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 ?

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5. Transpiration is a necessary evil in plants Explain .

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Textbook Activities Solved

1. 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.

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2. Demonstration of Root Pressure:

Choose a small soft stemed plant. Cut the stem horizontally near the base with a blade in the morning. You will see drops of solution oozing out of the cut stem due to root pressure.

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3. Determining Heart Rate:

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Additional Questions Fill In The Blanks

1. .....is responsible for the movement of water upto the base of the stem.

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2. The other name of red blood corpuscles is _____.

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3. The apices of the flaps of tricuspid valves are held in position by ..... .

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4. Blood vessels that supply blood to the cardiac muscles are .....

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5. Sinuses are the body cavities which are called ..... .

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Additional Questions Write True Or False For The Following Statements Write The True Statement For The False Statement

1. Root hairs are thin walled, slender extension of Parenchyma cells.

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2. The transpiration pull sucks the water column from the xylem tubes, so that the water is able to rise up in the tallest plants.

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

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4. Blood platelets help in clotting of blood, form clot at the site of injury and prevent blood loss.

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5. Match the following.

1. Universal Recipient	– (*a*) Left Atrio Ventricular Valve
2. Blood	– (*b*) Thin and non elastic cells
3. Thermocytes	– (*c*) Blood group AB
4. Universal Donor	– (*d*) Thick and elastic cells
5. Mitral	– (*e*) Bloos group 'O'
6. Veins	– (*f*) Blood platelets
7. Arteries	– (*g*) Connective tissue

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Additional Questions Anwer The Following In A Word Or A Sentence

1. What is Root Pressure?

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2. What is ascent of sap ?

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3. What do you mean by capillarity or capillary action ?

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4. Define Adhesion.

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5. What are capillaries?

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6. What is single circulation ?

Watch Video Solution

7. What is Cardiac Cycle?

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8. Define:-

Hypertension

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9. What is pulse rate?

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10. Why is membrane bound proteins called pumps?

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11. What are Rh antibodies?

Watch Video Solution

12. What are Lymph nodes?

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Additional Questions Answer The Following Briefly

1. Define the following. (a) Diffusion

(b) Osmosis

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2. (a) Name the main two components of blood.

(b) What does plasma contain?

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3. Explain the two types of Circulatory System.

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4. What is Blood Pressure? How is blood pressure expressed?

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5. In a Tabular Column, mention the distribution of Antigen (RBC) and antibody (Plasma) in different blood groups.

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6. Explain the causes of the sound of the Heart.

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7. The instruments used to measure blood pressure is

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8. What are the factors which affect transpiration?

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9. Draw a labelled diagram for the following.

1. (a) Root tip with root hairs.

(b) Guard cell in turgid and Flacid condition.

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10. Draw a labelled diagram of the internal structure of Human Heart.

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Additional Questions Answer The Following In Detail

1. Explain the types of blood circulation.

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2. Explain the Lymphatic System with diagram and mention the function of Lymph.

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Additional Questions Higher Order Thinking Skills Hots

1. What do you know about the following? (a) Anaemia (b) Leucocytosis (c) Leukopenia

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2. What are the factors affecting Ascent of Sap?

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3. What do you know about the following important terms, which we come across every day. (a) Heart attack (b) Cardiac arrest (c) Heart Failure

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4. What precautions can be taken for preventing heart disease?

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