NCERT solution for Transportation in Animals and Plants Science

Question 1

Match structures given in Column I with functions given in Column II.

Column I	Column II
(i) Stomata	(a) Absorption of water
(ii) Xylem	(b) Transpiration
(iii) Root hairs	(c) Transport of food
(iv) Phloem	(d) Transport of water
-	(e) Synthesis of carbohydrates

Answer

Column I	Column II
(i) Stomata	(b) Transpiration
(ii) Xylem	(d) Transport of water
(iii) Root hairs	(a) Absorption of water
(iv) Phloem	(c) Transport of food

Question 2

Fill in the blanks.
(i) The blood from the heart is transported to all parts of the body by the _____.
(ii) Hemoglobin is present in _____ cells.
(iii) Arteries and veins are joined by a network of _____.
(iv) The rhythmic expansion and contraction of the heart is called _____.
(v) The main excretory product in human beings is _____.
(vi) Sweat contains water and _____.

(vii) Kidneys eliminate the waste materials in the liquid form called _____.
(viii) Water reaches great heights in the trees because of suction pull caused by _____.

Answer

(i) arteries.

(ii) red blood

(iii) capillaries.

(iv) heartbeat.

(v) urea.

(vi) salts.

(vii) urine.

(viii transpiration.

Question 3

Choose the correct option:
(a) In plants, water is transported through
(i) xylem

(ii) phloem

(iii) stomata

(iv) root hair
Answer

(i) xylem

(b) Water absorption through roots can be increased by keeping the plants
(i) in the shade

(ii) in dim light

(iii) under the fan

(iv) covered with a polythene bag

Answer

(iii) under the fan

Question 4

Why is transport of materials necessary in a plant or in an animal? Explain.

Answer

(i) All animals and plants required food, water, oxygen for their survival. Transport of these materials in a plant or in animal is necessary for carrying out metabolic activities.
(ii) Transportation of these materials help in the supply of nutrients and energy to every parts of animals and plants need energy which they get from the transported materials.
(iii) The waste materials produced during metabolic activities are toxic and hence need to be removed from the body by transportation. They need to be transported to excretory organs

Question 5

What will happen if there are no platelets in the blood?

Answer

Platelets help in the clotting of blood at the time of injury. If there would be no platelets, then there would be no clotting of blood and person may die due to excess flow of blood from the body.

Question 6

What are stomata? Give two functions of stomata.

Answer

The tiny holes or openings present under the leaves of the plants is called stomata.
Two functions of stomata:
(i) It helps in breathing of the plants.
(ii) It helps in exchange of gases takes place inside the plants cells.

Question 7

Does transpiration serve any useful function in the plants? Explain.

Answer

(i) The excess water absorbed by the root system of the plants lost in the form of water vapour to their surroundings by the process of transpiration.
(ii) It also help in transport of absorbed water to the leaves of plants from the roots for photosynthesis and helping the plants keeping erect.
(iii) Transpiration also produces cooling effect for the plants.

Question 8

What are the components of blood?

Answer

The main components of blood are:
(i) Plasma
(ii) Red blood cells (RBC)- It carries oxygen
(iii) White blood cells (WBC)- fight again germs
(iv) Platelets-It help in clotting of blood

Question 9

Why is blood needed by all the parts of a body?

Answer

Blood is needy by all the parts of a body and it plays a important role. Here are some of the reason's

(i) It carries oxygen to all the parts of the body and also carries carbon dioxide back to the lungs.
(ii) It carries digested food to various parts of the body for absorption.
(iii) It contains platelets which help in the clotting of blood.
(iv) It helps in maintaining constant body temperature.
(v) It transports hormones and help in fighting the body with germs and bacteria.

Question 10

What makes the blood look red?

Answer

The presence of red pigment called hemoglobin in red blood cells (RBC) makes the blood look red.

Question 11

Describe the function of the heart.

Answer

Functions of the heart:
(i) It helps in the circulation of oxygen rich blood throughout the body by the pumping.
(ii) The heart has four chambers. The top chambers are called auricles (or atria) and the lower two chambers are called ventricles.

(iii) The right auricle receives carbon-dioxide rich blood from various parts of the body. The right ventricle pumps the blood to the lungs. Inside lungs, carbon-dioxide is exchanged with oxygen.

iv) The left auricle receives oxygen-rich blood from the lungs. The left ventricle pumps this blood to the rest of the body.

(v) It shows rhythmic contraction and relaxation for movement of blood.

Question 12

Why is it necessary to excrete waste products?

Answer

The waste materials produced during the metabolic activities are toxic to the body and must not be accumulated inside and therefore it has to be excreted out from the body by the process of excretion.

Question 13

Draw a diagram of the human excretory system and label the various parts.

Answer