Railways (Group-D & ALP) Science Questions with solution

RRB Science MCQs Quiz 11

Directions: Kindly Study the following questions carefully and choose the right answer:

1. Which of the following is/are true about the functions of blood in human body?

I. It consists of a fluid medium called plasma which transports oxygen.

II. It contains red blood cells which transports food, carbon dioxide and nitrogenous wastes.

III. Blood makes up around 7% of the weight of a human body.

A. Only III B. Only I C. Only I and II D. Only II and III

2. Which of the following is/are true about the human heart?

I. The heart has valves to ensure blood does not flow backwards when the atria or ventricles contract.

II. Oxygen-rich blood from the lungs enters the heart via the right atrium.

III. Ventricles have thicker muscular walls than the atria.

A. Only I B. Only II C. Only I and III D. Only I and II

3. Blood Pressure in humans is measured using the

A. Sphygmomanometer B. Thermometer C. Anemometer D. None of the above

4. Which of the following statements is/are correct?

I. In vertebrates, blood flows twice through the heart in each cycle.

II. Amphibians and many reptiles have three-chambered hearts.

III. Fishes have only two chambers to their hearts.

A. Only II B. Only I and II C. Only II and III D. All of the above

5. Which of the following is/are true about blood pressure in the human body?

I. This pressure is much greater in arteries than in veins.

II. The pressure of blood during contraction is called diastolic pressure.

III. The normal systolic pressure is about 120 mm of Hg and diastolic pressure is 80 mm of Hg.

A. Only III B. Only I and III C. Only II and III D. All of the above

6. Arteries are the vessels which carry blood away from the heart to various organs of the body. Which of the following is/are true about their functioning?

I. They have thick, elastic walls.

II. They also collect the blood from different organs and bring it back to the heart.

III. On reaching an organ, the artery divides into smaller vessels called capillaries.

A. Only II B. Only III C. Only I and II D. Only I and III

7. What is the function of Lymph fluid?

A. It carries digested from intestine.

B. It drains excess fluid from extra cellular space back into the blood.

C. Both are correct. D. Both are incorrect.

8. Which of the following moves/transports water and mineral from the soil to other parts of the plants?

A. Phloem B. Xylem C. Chlorophyll D. Roots

9. Which of the following phenomenon is responsible for the movement of water in plants?

A. Pressure difference B. Concentration difference C. Transpiration D. Both B and C

10. Transpiration is mainly effective during _____ ?

A. Day B. Early evening C. Just after sunset D. Night

Correct Answers:

1	2	3	4	5	6	7	8	9	10
A	C	A	D	B	D	C	B	D	D

Explanations:

1.

Statement I is incorrect as the plasma transports food, carbon dioxide and nitrogenous wastes.

Statement II is incorrect as oxygen is carried by the red blood cells.

Statement III is correct.

Hence, option A is correct.

2.

Statement I is correct. Statement III is correct.

Statement II is incorrect as oxygenated blood enters the heart via the **Left Atrium.**

Hence, option C is correct.

3.

Anemometer is used to measure wind speed.

Thermometer is used to measure body temperature.

Hence, option A is correct.

4.

All the statements are correct.

I. The separation of the right side and the left side of the heart is useful to keep oxygenated and deoxygenated blood from mixing. Such separation is useful in beings that have high energy needs and constantly use energy to maintain their body temperature. Ex: Mammals. Also, in vertebrates, Blood goes through the heart twice during each cycle in other vertebrates. This is known as double circulation.

II. In some animals like reptiles, the body temperature depends on the temperature in the environment. Such animals have three-chambered hearts, and tolerate some mixing of the oxygenated and de-oxygenated blood streams.

III. Fishes have only two chambers to their hearts, and the blood is pumped to the gills, is oxygenated there, and passes directly to the rest of the body. Thus, blood goes only once through the heart in the fish during one cycle of passage through the body.

Hence, option D is correct.

5.

Statements I and III are correct.

Statement II is opposite of what is correct. The pressure of blood inside the artery during ventricular systole (contraction) is called systolic pressure and pressure in artery during ventricular diastole (relaxation) is called diastolic pressure.

Hence, option B is correct.

6.

I. This is correct.

II. This is incorrect. It is the veins that collect the blood from different organs and bring it back to the heart.

III. This is correct.

Hence, option D is correct.

7.

Both the statements are correct.

Hence, option C is correct.

8.

Xylem moves water and minerals obtained from the soil. The other, phloem transports products of photosynthesis from the leaves to other parts.

Hence, option B is correct.

9.

In xylem tissues, stems and leaves are interconnected to form a continuous system of water-conducting channels reaching all parts of the plant. At the roots, cells in contact with the soil actively take up ions. This creates a **difference in the concentration of these ions between the root and the soil**. Water, therefore, moves into the root from the soil to eliminate this difference.

However, this pressure by itself is unlikely to be enough to move water over heights. Plants use another strategy to move water in the xylem upwards to the highest points of the plant body. Provided that the plant has an adequate supply of water, the water which is lost through the stomata is replaced by water from the xylem vessels in the leaf. In fact, evaporation of water molecules from the cells of a leaf creates a suction which pulls water from the xylem cells of roots. The loss of water in the form of vapour from the aerial parts of the plant is known as **transpiration**. Thus, transpiration helps in the absorption and upward movement of water and minerals dissolved in it from roots to the leaves.

Hence, option D is correct.

10.

While the effect of root pressure in transport of water is more important at night, Transpiration is important during the day when the stomata are open. Thus, transpiration pull becomes the major driving force in the movement of water in the xylem during daytime.

Hence, option D is correct.