

TEST – 9**CH – 9****BIOLOGY****Time Allowed: 15 Minutes****CLASS 9TH – 019****Paper: (Objective Type)****Maximum Marks: 12**

Note : Write answers to the questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the circle in front of A, B, C or D with pen ink to each question on the answer sheet provided.

Q. 1	QUESTIONS	(A)	(B)	(C)	(D)
1.	Tissue responsible for the transport of water and dissolved substance from roots to aerial parts in plants is.	Phloem	Xylem	Cambium	Ground
2.	During embryonic development red blood cells are produced in.	Sternum	Spleen	Ribs	Vertebrae
3.	In one heartbeat, diastole remains about seconds.	0.6	0.8	0.4	0.7
4.	BY which instruments the sound of "Lub dub" can be heard?	Stethoscope	Telescope	Microscope	Sound box
5.	In normal adult human, the weight of heart is.	200-250 g	150-200 g	250-300 g	100-200 g
6.	Tricuspid valve contains no. of flaps.	Four	Five	Three	Two
7.	Who discovered ABO Blood group system?	Karl Landsteiner	Lamarck	Rudolf Virchow	Malvin Calvin
8.	It helps in blood clotting.	Calcium	Phosphorus	Nitrogen	Sodium
9.	"AB" blood group individual are called.	Sickle cells	Universal donors	Universal recipients	Necrosis
10.	These bloods called universal donor.	Group A	Group B	Group O	Group AB
11.	What is normal pH of Blood?	6.8	7.0	7.2	7.4
12.	Which one of these is inherited disease.	Malaria	Typhoid	Leukaemia	Thalassemia

A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1	(A)	(B)	(C)	(D)	4	(A)	(B)	(C)	(D)	7	(A)	(B)	(C)	(D)	10	(A)	(B)	(C)	(D)
2	(A)	(B)	(C)	(D)	5	(A)	(B)	(C)	(D)	8	(A)	(B)	(C)	(D)	11	(A)	(B)	(C)	(D)
3	(A)	(B)	(C)	(D)	6	(A)	(B)	(C)	(D)	9	(A)	(B)	(C)	(D)	12	(A)	(B)	(C)	(D)

نوٹ: معروضی سوال نامے کو تو جیسے پر پڑھیں اور ہر MCQ کی درست آجشن A, B, C, D کو پین کی سیاہی یا مارکر سے اس طرح پُر کریں کہ سیاہی دائرے سے باہر نہ نکلے۔ ایک سے زیادہ دائروں کو پُر کرنے یا کاٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔

TEST- 9**CH -9****BIOLOGY**

Time Allowed: 1:45 hours

CLASS 9TH – 019

Paper: (Essay Type)

Maximum Marks: 48

(PART – I)**2. Write short answers to any FIVE (5) questions:**

10

- (i) What is Fibrinogen? Write down its function.
- (ii) What is Angina Pectoris?
- (iii) Define blood group systems.
- (iv) What is meant by transpiration? Describe mode of transpiration.
- (v) Describe function of xylem and phloem.
- (vi) Write down the four factors affecting the rate of transpiration.
- (vii) What do you mean by stomatal transpiration?
- (viii) Define Turgor.

3. Write short answers to any FIVE (5) questions:

10

- (i) Explain two factors which can cause transpiration pull.
- (ii) Explain transport of food in Human beings.
- (iii) Describe function of Leukocytes.
- (iv) Define Antigen.
- (v) Define pulmonary circulation and systemic circulation.
- (vi) What is meant by Arteriosclerosis?
- (vii) What is Angioplasty?
- (viii) Define capillary. Give its functions?

4. Write short answers to any FIVE (5) questions:

10

- (i) Define cohesion tension theory.
- (ii) What are guard cells?
- (iii) What is stoma?
- (iv) Define blood.
- (v) Differentiate between Arteries and veins.
- (vi) Write the definition of systole and diastole.
- (vii) Which person are Universal Donors and Universal Recipients?
- (viii) What do you mean by pus? How is it formed?

(PART – II)**Note: - Attempt any TWO questions.****5. (a) What are factors affecting the rate of transpiration.**

5

(b) Write a short note Blood Plasma.

4

6. (a) How transport of water in plants takes place

5

(b) Write a note A.B.O blood system.

4

7. (a) Where red blood cells are formed in human? Describe their structure and function.

5

(b) What four chambers make the human heart and how blood flows through these chambers.

4

Test - 9

(Part - I)

(i)

2. Define Fibrinogen? Write down its functions.

Ans

A soluble protein present in blood plasma, from which fibrin is produced by the action of the enzyme thrombin.

Functions

It is a plasma protein that takes part in the blood clotting process.

(ii)

What is Angina Pectoris.

Ans

It means "chest pain". It is not as severe as heart attack. The pain may occur in heart and often in left arm & shoulder.

(iii)

What is blood group system.

Ans

Blood group systems are a classification of blood based on the presence or absence of antigens on the surface of red blood cells.

(iv)

What is meant by transpiration? Describe mode of transpiration.

Ans.

Loss of a plant or leaf the exhalation of water vapour through the stomata. "Plants lose more than 90% of their water through transpiration."

(v)

Describe function of xylem and phloem.

Ans

Xylem tissue is responsible for the transport of water and dissolved substances from roots to aerial parts.

Phloem tissue is responsible for the conduction of dissolved organic matter b/w different parts of plant body.

(vi)

Write down four factors affecting the rate of transpiration.

Ans

(i) Light

(ii) Temperature

(iii) Air humidity

(iv) Air movement

(v) Leaf surface area.

(vii)

What is meant by stomatal transpiration?

Ans

Stomata are minute pores confined to epidermis of green shoot & leaves. Opening & closing of stomata are controlled by guard cells.

(viii)

Define Turgor.

Ans

The state of turgidity & resulting rigidity of cells or tissues, typically due to the absorption of fluid.

3.

(i)

Explain two factors which can cause transpiration pull.

Ans.

- (i) Water is held in a tube (xylem) that has smaller diameter.
- (ii) Water molecules cohere to each other.

(ii)

Explain transport of food in Human beings.

Ans

The task of transport of different materials in human body is performed by two complex systems i.e. The blood circulatory system. Lymphatic system

(iii)
Describe function of Leukocytes.

Ans

White blood cells, also called leukocytes, are the cells of the immune system that are involved in protecting the body against both infectious disease & foreign invaders.

(iv)
Define Antigen.

Ans

An Antigen is a molecule that can stimulate an immune response (antibody production etc).

(v)
Define pulmonary circulation & systemic circulation.

Ans

The pathway in which deoxygenated blood is carried from heart to lungs & in return oxygenated blood is carried from lungs to heart is called pulmonary circulation.

The pathway in which oxygenated blood is carried from heart to body tissues & in return deoxygenated blood is carried from lungs to heart is called systematic circulation.

(Lvi)
What is meant by Arteriosclerosis?

Ans

It is commonly referred to as a "narrowing" of arteries. It is chronic disease in which there is accumulation of fatty materials, cholesterol, or fibrin in arteries.

(Lvi)
What is Angioplasty?

Ans

The mechanical widening of a narrowed or totally obstructed blood vessels.

(Lvi)
Define capillary. Give its functions?

Ans

It is the smallest blood vessels, which are formed by the division of arterioles. The exchange of materials b/w blood & tissue fluid is carried out through the capillaries.

4.

(Li)
Define cohesion tension theory.

Ans

The force which carries water upward through the xylem is transpiration pull. Transpiration creates a pressure difference that pulls water & salts up from roots.

(iii)
What are guard cells?

Ans

Each of a pair of curved cells that surround a stoma, becoming larger or smaller according to the pressure within the cells.

(iii)
What is stoma?

Ans

The two guard cells of a stoma are attached to each other ends. The inner concave sides of guard cells that enclose a stoma are thicker than the outer convex sides.

(iv)
Define blood.

Ans

Blood is a specialized body fluid that is composed of a liquid called plasma & blood cells.

(v)
Arteries & veins.

Ans

A vein is a blood vessel that carries blood toward the heart.

Arteries are the blood vessels that carry blood away from the heart.

Qr.
Defination of systole & diastole.

Ans
Diastole & Systole are two phases of the cardiac cycle. They occur as the heart beats, pumping blood through a system of blood vessels that carry blood to every part of the body.

Qr.
Which person are Universal Donors & Universal Recipients?

Ans
It transfusions of packed red blood cells, individuals with type O Rh D -ve blood are called universal donors. Those with type AB Rh D +ve blood are called Universal Recipients.

Qr.
What do you mean by Pus? How is it formed?

Ans
WBCs die in the process of killing the germs. These dead cells accumulate & make the white substance called pus, seen at infection sites.

5.

Part (II)

(a)

Ans

Factor affecting the rate of transpiration.

Light

The rate of transpiration is directly controlled by the opening & closing of stomata & it is under the influence of light.

Temperature

Higher temperature reduces the humidity of surrounding air & also increases the kinetic energy of water molecules. In this way it increases rate of transpiration.

Air movement

Wind carries away the evaporated water from leaves & it causes an increase in the rate of evaporation from the surfaces of mesophyll.

Leaf surface area

The rate of transpiration also depends upon the surface area of leaf. More surface area provides more stomata & there is more transpiration.

(b)

Blood plasma

Plasma is primarily water in which proteins, salts, metabolites & wastes are dissolved. Water constitutes about 90-92% of plasma, 8-10% are dissolved substance. Salts make up 0.9% of plasma, by weight. Proteins make 7-9% by weight of plasma. Plasma also contains digested food, nitrogenous wastes & hormones. Respiratory gases i.e. CO_2 & O_2 are present in the plasma.

6.

(a)

Ans

The process by which water is raised to considerable heights in plants has been studied for years in botany. The result of this research is "Cohesion Tension" theory. When a leaf transpires, the water concentration of its mesophyll cells drops. This drop causes water to move by osmosis from the xylem of leaf into mesophyll cells. Water is held in a tube that has small diameter. Water molecules adhere to the walls of xylem tube. It cohere to each other.

(b) A.B.O blood system

Ans!

It is the most important blood systems in human.
It was discovered by Austrian Karl Landsteiner.
In this system, there are four blood groups.

Blood Group A

In persons which blood group A is present & antigen B is absent. So their blood serum will contain anti-B antibodies.

Blood Group B

In persons which blood group B antigen B is present & antigen A is absent.

Blood Group AB

Antigens AB are present i.e. neither is absent.

Blood Group O

Antigens A nor antigen B is present i.e. both are absent.

7.

(a)
Ans

In 1930 the R-h blood group system. In this system, there are two blood groups i.e. Rh+ & Rh-. These blood groups are distinct from each other on the basis of antigens called Rh factors present on the surface of RBCs. A person having Rh factors has blood group Rh-positive while a person not having Rh factors has blood group Rh-negative. Unlike the naturally occurring anti-A & anti-B antibodies of the ABO-system, an Rh-ve person does not produce anti-Rh antibodies unless Rh-factors enter in his/her blood.

(b)
Ans

The heart is muscular organ responsible for pumping blood through the blood vessels by repeated contractions.

Pericardium:

Heart is enclosed in a sac known as pericardium.

Pericardial Fluid:

There is a fluid known as

pericardial fluid b/w pericardium & heart walls.
It reduces friction b/w pericardium & heart during heart contractions.

Heart Chambers:

-- Human heart consist of four chambers like the heart of mammals & birds.

Atria:

-- The upper thin-walled chambers are called left & right atria (singular atrium).

Ventricles:

-- The lower thick-walled chambers are called left & right ventricles. Left ventricle is the largest & strongest chamber in heart.