SET A

Samagra Shiksha, Keralam

Second Terminal Examination 2023-24

Class : IX | **Biology** | **Time : 1½ Hours** | **Score : 40**

Instructions

- 15 minutes is given as cool off time. You may use the time to read the questions and plan your answers.
- Answer only on the basis of instructions and questions given.
- Keep in mind the score and time while answering the questions.

Answer any 5 questions from 1 - 6. Each carries One score. **(5 × 1 = 5)**

1. Choose the desirable rate of blood pressure in humans from the given options. (1)

   (100/60mmHg, 120/80mmHg, 90/110mmHg, 75/125mmHg)

2. Correct mistake if any, in the underlined part of the following statement.
   Emphysema is the inflammation of lungs caused by the accumulation of Carbon monoxide and Tar present in tobacco. (1)

3. Choose the correct pairs from the following. (1)

Albumin	-	Regulates blood pressure
Globulin	-	Destruction of red blood cells
Fibrinogen	-	Coagulation of blood
Haemoglobin	-	Helps in defense

4. Which among the given animals is the odd one in connection with their excretory organ? Write the common feature of others. (1)

   (Snake, Earthworm, Fish, Frog)

5. Analyse the word pair relationship and fill accordingly. (1)

   a. Bacteria : Lactic acid

   b. Yeast : .....

6. Name the pores present at the tip of the grass leaves to eliminate excess water? (1)

Answer any 6 from questions 7 - 13. Each carries Two scores. **(6 × 2 = 12)**

7. "Drinking a lot of water and urinating timely helps to avoid urinary infections". Do you agree with this statement? Why? (2)

8. Anaerobic respiration takes place in human muscles under certain circumstances.

   a. Give reason for this. (1)

   b. Name the product of this process. (1)

9. Analyse the given statement and write answers to the questions.

   "*Green plants play an important role in saving the earth from global warming*".

   a. Which process in green plants helps to reduce global warming? (1)

   b. What is the role of green plants in regulating the level of Carbon dioxide and Oxygen in the atmosphere? (1)

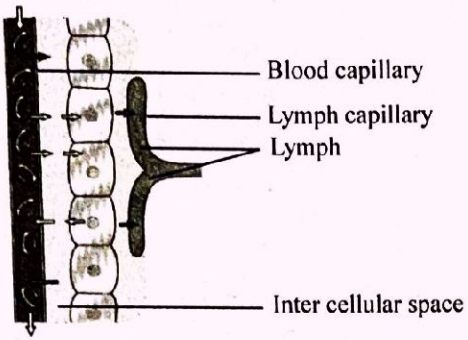
10. *"The toxic substances produced and reached inside the human body are changed into harmless substances."*

a. Name the organ responsible for this activity. (1)

b. Complete the illustration, showing the chemical reaction taking place in this organ suitably. (1)

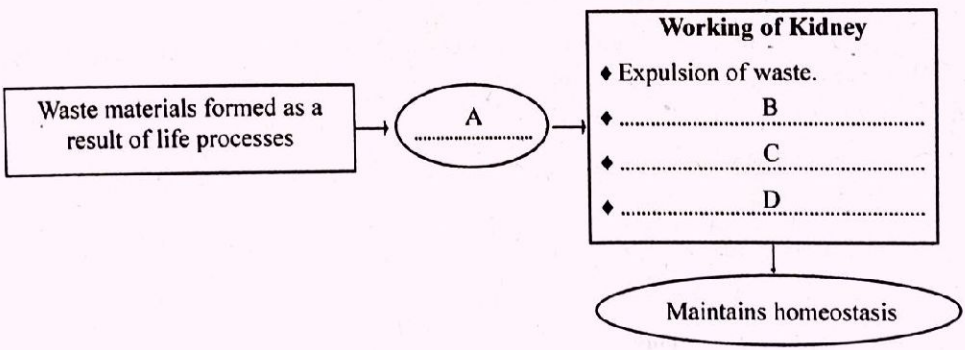
..... + ... + water $\xrightarrow{\text{enzymes}}$ Urea

11. Observe the illustration showing the formation of tissue fluid and answer the given question. (2)

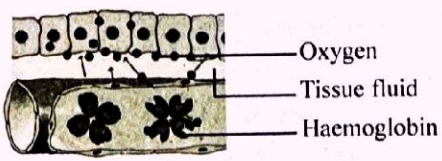


- How the amount of tissue fluid is precisely maintained in the intercellular space?

12. Complete the given flowchart related to homeostasis suitably. (2)

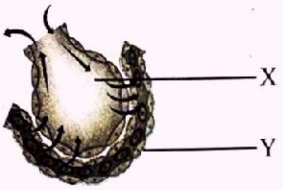


13. Analyse the given picture carefully and state the role of haemoglobin in oxygen transport. (2)



Answer any 5 from questions 14 - 20. Each carries Three scores. **(5 × 3 = 15)**

14. Observe the figure and answer the questions.



a. Identify and write X and Y. (1)

b. The pecularities of X and Y are suitable for performing its functions effectively. Substantiate. (2)

15. Components of saliva and their digestive actions are given in the box. Arrange them in the following table suitably. (3)

Destroy germs, Mucus, Partial conversion of starch to maltose, Salivary amylase, Makes food slimy, Lysozyme

Components of Saliva	Action
♦	♦
♦	♦
♦	♦

16. "*In the case of kidney failure, blood is purified by passing through artificial kidneys.*"

a. What is the name of this process? (1)

b. Name the chemical substance used in this process. (1)

c. Write the importance of this chemical substance. (1)

17. Analyse the statement and answer the questions.

"*A fluid is filled in between the double layered membrane of the lungs*".

a. Name the fluid. (1)

b. State the function of this fluid. (1)

c. What is the importance of intercostal muscles seen in between the ribs? (1)

18. Observe the picture of Bowmann's capsule and asnwer the questions.

a. Locate the position of Bowmann's capsule in the kidney. (1)

b. Name the branch of renal artery which enters the Bowmann's capsule. (1)

c. Name the network of capillaries seen inside the Bowmann's capsule. (1)

19. Cellular respiration is the process of releasing energy from glucose inside the cells.

a. What are the two stages of cellular respiration? (1)

b. Name the cell organelle in which the second phase of cellular respiratin takes place. (1)

c. What are the end products of cellular respiration? (1)

20. Observe the illustration and answer the questions.

A B

a. Write the process responsible for the appearance of water droplets inside the plastic cover of picture A. (1)

b. What are the phenomena that help water to reach the leaves and other parts easily? (1)

c. State how far the structure of xylem is suitable for performing this process effectively. (1)

Answer any 2 from questions 21 - 23. Each carries Four scores. **(2 × 4 = 8)**

21. Analyse the following statements and give reasons for each.

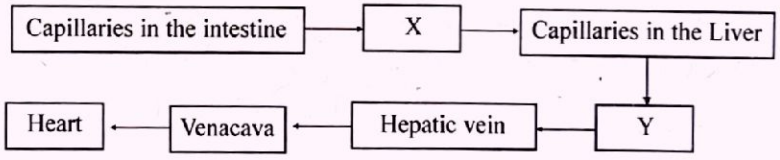
a. Trachea is always kept open. (1)

b. When vital capacity increases, energy production of the body also increases. (1)

c. Food stuffs that contain iron, help in the transport of oxygen. (1)

d. Various respiratory organs are seen in the life cycle of frog. (1)

22. Analyse the flowchart and answer the questions.



a. Identify and write X and Y. (1)

b. Which type of blood circulation is mentioned in the illustration. (1)

c. Why is it essential to reach simple nutrients in to liver? (2)

23. Redraw the given diagram and label the parts specified below.

Redrawing the picture (1)

a. Part in which ultrafilters of nephrons are found. (1)

b. Region where urine from filters flows into. (1)

c. Part in which long tubules of nephrons are found. (1)