

SCIENCE (BIOLOGY)
WORKSHEET_130923
CHAPTER 06 TISSUES

SUBJECT: SCIENCE

CLASS : IX

MAX. MARKS : 40

DURATION : 1½ hrs

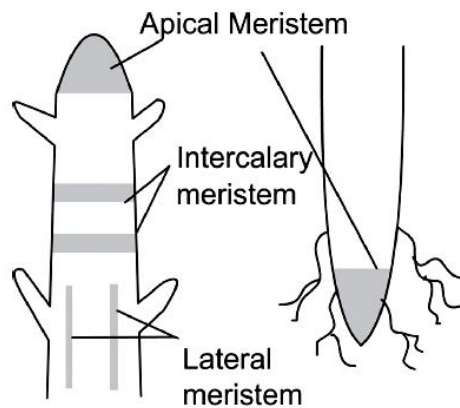
General Instructions:

- (i). All questions are compulsory.
- (ii). This question paper contains 20 questions divided into five Sections A, B, C, D and E.
- (iii). **Section A** comprises of 10 MCQs of 1 mark each. **Section B** comprises of 4 questions of 2 marks each. **Section C** comprises of 3 questions of 3 marks each. **Section D** comprises of 1 question of 5 marks each and **Section E** comprises of 2 Case Study Based Questions of 4 marks each.
- (iv). There is no overall choice.
- (v). Use of Calculators is not permitted

SECTION – A

Questions 1 to 10 carry 1 mark each.

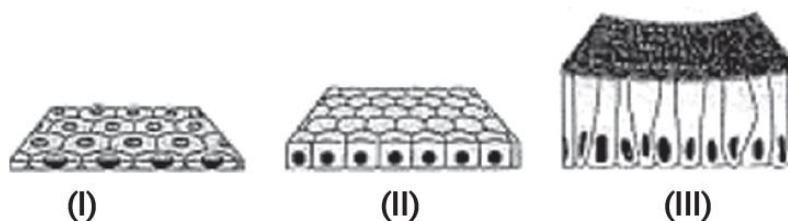
1. Observe the given figure and answer the question that follows.



What is the main function of meristematic tissue?

- (a) Growth (b) Photosynthesis (c) Respiration (d) Transpiration

2. The picture shows three types of tissues found in the human body.



The inner lining of alveoli (air sacs in lungs) is very thin and delicate. Which type of tissue forms the inner lining of alveoli?

- (a) Tissue (I) (b) Tissue (II) (c) Tissue (III) (d) Tissue (I) and (II)

3. During recess, Ritesh was having lunch with his friends. One of his friends said that the intestine helps in the digestion of food. Ritesh's sister was also present there. She asked the name of tissue which is responsible for the absorption of food.

- (a) Stratified squamous epithelium (b) Columnar epithelium
(c) Spindle fibres (d) Cuboidal epithelium

4. Involuntary muscles are found in:

(I) Skeletal muscles (II) Cardiac muscles (III) Striated muscles (IV) Smooth muscles

Options:

- (a) (I) and (II) (b) (II) and (III) (c) (II) and (IV) (d) All of the above except (I)

5. Blood is a connective tissue which has a fluid (liquid) matrix called plasma in which RBCs, WBCs and platelets are suspended. The plasma contains proteins, salts and hormones. Blood flows and transports gases, nutrients, hormones and waste materials to different parts of the body.

Hemoglobin is present in which component of the blood:

- (a) RBCs (b) WBCs (c) platelets (d) plasma
6. Which of the following is responsible for a bamboo stem's rapid extension?
- (a) Lateral meristem
(b) Intercalary meristem
(c) Apical meristem
(d) Cambium
7. Choose the wrong statement.
- (a) The nature of the matrix differs according to the function of the tissue.
(b) Fats are stored below the skin and in between the internal organs.
(c) Epithelial tissues have intercellular spaces between them.
(d) Cells of striated muscles are multinucleated and unbranched.

8. The tissue that lines and covers the body is:

(a) Epithelial (b) Connective (c) Nervous (d) Muscle

In the following questions 9 and 10, a statement of assertion (A) is followed by a statement of Reason (R). Choose the correct answer out of the following choices.

- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

9. **Assertion (A):** Xylem and phloem are called vascular tissues.

Reason (R): Vascular tissues conduct water, mineral salts and food materials to different plant parts.

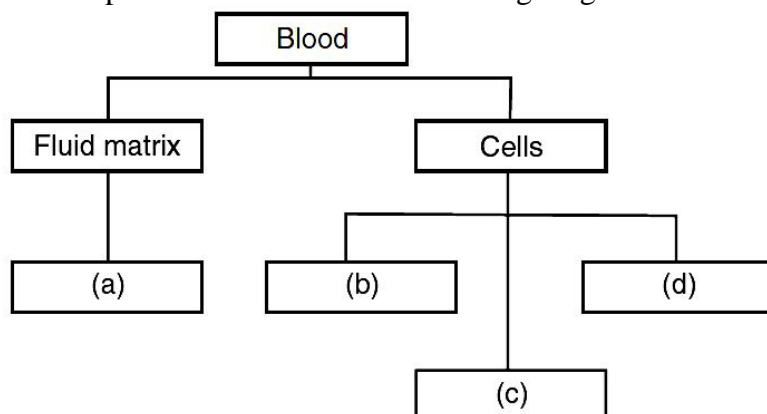
10. **Assertion (A):** Cilia are hair-like structures present on the inner surfaces of hollow organs.

Reason (R): Ciliated epithelium causes the movement of cilia to push the particles in a particular direction.

SECTION – B

Questions 11 to 14 carry 2 marks each.

11. Mention the different components of blood in the following diagram ?



12. Why are plants and animals made up of different tissues?
13. Why is blood called connective tissue?
14. (a) What is the lining of blood vessels made up of?
 (b) What is the lining of the small intestine made up of?
 (c) What is the lining of kidney tubules made up of?
 (d) Where are epithelial cells with cilia found?

SECTION – C

Questions 15 to 17 carry 3 marks each.

15. Name three types of muscle tissues and give function of each.
16. Give reasons for:
 (a) We get a crunchy and granular feeling when we chew pear fruit.
 (b) Branches of a tree move and bend freely in high wind velocity.
 (c) Intercellular spaces are absent in sclerenchymatous tissues.

OR

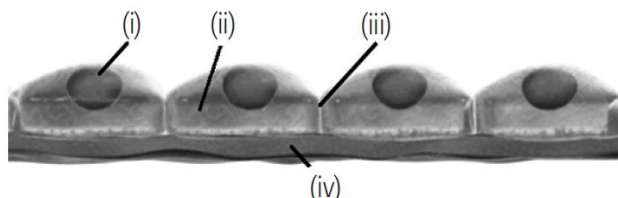
Differentiate between meristematic and permanent tissue.

17. (i) Name the animal tissue which is present in the larynx.
 (ii) Write the chemical constituents of this tissue.
 (iii) What functions does this tissue perform?

SECTION – D

Questions 18 carry 5 marks each.

18. A teacher shows a type of animal tissue in two different shapes and asks the following questions related to it to the students in class.



- (a) Which animal tissue is represented in the figure given above?
 (b) Label figure (i) to (iv).
 (c) Describe the tissue and its function.
 (d) What are the different types of animal tissues?

OR

What is the basic unit of the nervous system? Draw a well-labelled diagram of the unit and explain the function of each element of this unit.

SECTION – E (Case Study Based Questions)

Questions 19 to 20 carry 4 marks each.

19. Read the following information and answer the questions based on information and related studied concepts.

A student investigated the loss of water from plant leaves. Following steps were taken by the student to conduct the experiment.

Step 1: Took four leaves from the same plant.

Step 2: Weighed all the ten leaves.

Step 3: Hung the leaves in the classroom for four days.

Step 4: Weighed all leaves again.

Step 5: Calculated the amount of water lost by the leaves.

Step 6: Repeated steps 1 to 5 with grease spread on the upper surface of the leaves.

Step 7: Repeated steps 1 to 5 with grease spread on both the upper and lower surfaces of the leaves.

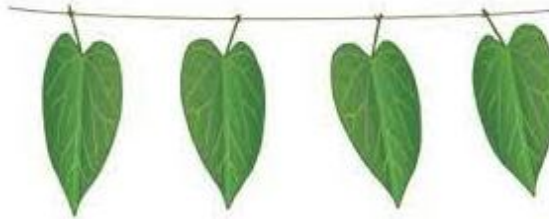


Table shows the results obtained by the student.

Treatment of leaves	Amount of water lost by leaves (in grams)
No grease was used on the leaves.	0.98
Grease used on the upper surface of the leaves.	0.86
Grease used on the upper and lower surface of the leaves.	0.01

(a) What are these pores observed known as? (1)

(b) Very little water was lost from the leaf when both surfaces were covered with grease. Give a reason. (2)

(c) Compare the rate of transpiration in day and night. (1)

20. Read the given passage and answer the questions that follow based on the passage and related studied concepts.

Mahesh while playing football with his friends got injured suddenly. His friends took him to the hospital and the doctor told that he was suffering from sprain and advised bed rest. Every afternoon, his friends visited him to enquire about his health.



(a) During a sprain, which type of tissue are stressed? (1)

(b) Which tissue connects bones to muscles in humans? (1)

(c) Why dislocation of bones takes place? (1)

(d) Which tissue connects one bone to another bone? (1)

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