

# WORKSHEET: TISSUES

## Class IX

For Assertion–Reason questions, choose the correct option:

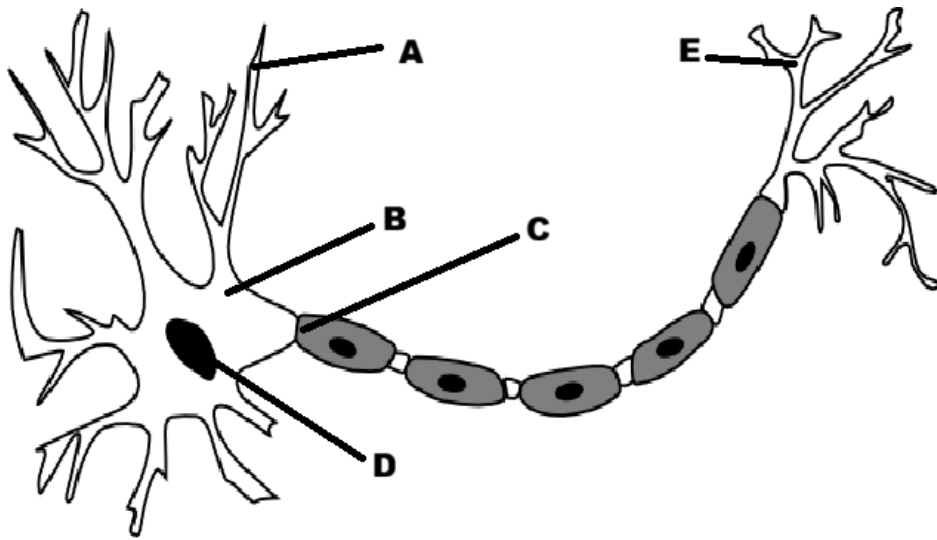
- (A) Both A and R are true and R correctly explains A;
- (B) Both A and R are true but R does not explain A;
- (C) A is true but R is false;
- (D) A is false but R is true.

### MULTIPLE CHOICE QUESTIONS

1. The tissue responsible for the growth in length of roots and shoots is:  
(a) Lateral meristem (b) Apical meristem (c) Permanent tissue (d) Intercalary meristem
2. Which plant tissue provides flexibility to young stems and leaf stalks?  
(a) Parenchyma (b) Collenchyma (c) Sclerenchyma (d) Xylem
3. Which of the following is correctly matched?  
(a) Xylem – Transport of food  
(b) Phloem – Transport of water  
(c) Sclerenchyma – Mechanical strength  
(d) Parenchyma – Conducts nerve impulses
4. Which of the following is a component of blood?  
(a) Neuron (b) Red blood cell (c) Muscle fibre (d) Sclereid
5. Which tissue is responsible for voluntary movement in the body?  
(a) Cardiac muscle (b) Smooth muscle (c) Striated muscle (d) Nervous tissue
6. Assertion (A): Striated muscles are multinucleate.  
Reason (R): Striated muscle fibres are long, cylindrical and unbranched.  
(a) A (b) B (c) C (d) D
7. Assertion (A): Xylem transports water and minerals from roots to other parts of the plant.  
Reason (R): Xylem is made only of living cells.  
(a) A (b) B (c) C (d) D
8. Which tissue forms the lining of the mouth and oesophagus?  
(a) Squamous epithelium (b) Cuboidal epithelium (c) Ciliated epithelium (d) Glandular epithelium
9. A tissue has long, narrow cells with very thick walls and no living protoplasm at maturity. It is:  
(a) Parenchyma (b) Collenchyma (c) Sclerenchyma (d) Meristematic tissue

### SECTION B: VERY SHORT ANSWER QUESTIONS

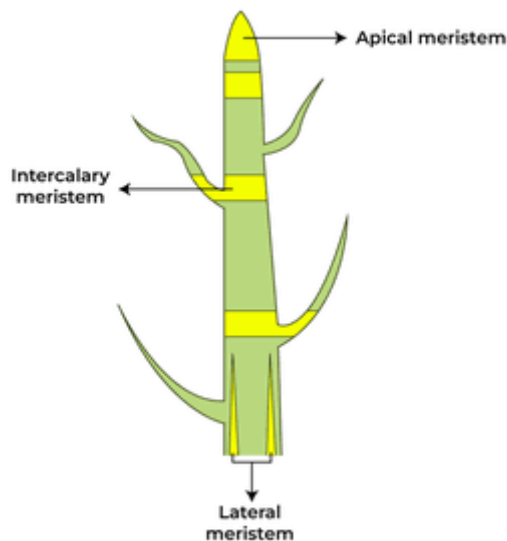
10. Define a tissue.
11. Name the meristematic tissue present at the base of leaves or internodes.
12. Name the connective tissue that connects muscles to bones.
13. Name the type of epithelial tissue present in the walls of the intestine.
14. Identify the diagram below and answer following questions-
  - a) Label A,B,C,D,E
  - b) Write one function of A
  - c) Name the structure



15. Draw a neat, labelled diagram of a Meristematic tissue and label all three types of meristematic tissue. Write one function of each meristematic tissue.
16. Define and explain permanent tissue.
17. Explain any three types of epithelial tissues.

#### Solutions-

1. (b) Apical meristem
2. (b) Collenchyma
3. (c) Sclerenchyma
4. (b) Red blood cell
5. (c) Striated muscle
6. (B) Both Assertion and Reason are true, but the Reason is not the correct explanation of the Assertion.
7. (C) Assertion is true, but Reason is false.
8. (a) Squamous epithelium
9. (c) Sclerenchyma
10. A tissue is a group of similar cells that work together to perform a specific function.
11. Intercalary meristem
12. Tendon
13. Columnar epithelium
14. Diagram-based question:
  - a) A-Dendrites, B-Cell body, C-Axon, D-Nucleus, E-Axon terminal
  - b) Receives signal/impulses
  - c) Neuron
15. Meristematic tissue diagram and functions:



- Apical meristem: Increases the length of the root and shoot.
- Intercalary meristem: Increases the length of internodes.
- Lateral meristem: Increases the girth/thickness of stems and roots.

16. Permanent tissue consists of cells that have lost the ability to divide and have attained a permanent shape, size and function. It develops from meristematic tissue. It is mainly of two types: simple permanent tissue and complex permanent tissue.

17. Three types of epithelial tissues.

1. Squamous epithelium: Consists of thin, flat cells and forms a protective lining. It is found in the lining of the mouth and oesophagus.
2. Cuboidal epithelium: Consists of cube-shaped cells and is found in kidney tubules and ducts of glands. It provides support and helps in secretion.
3. Columnar epithelium: Consists of tall, pillar-like cells and is found in the lining of the intestine. It helps in absorption and secretion.