



Class: 7th

Subject: Biology

Examination: FA1

Chapter 1: Tissue

A. Fill in the blanks

1. Tissue
2. Meristematic
3. Cambium
4. Xylem
5. Epithelial
6. Adipocytes
7. Muscle
8. Fluid
9. Cardiac
10. Cyton

B. Write true or false. If false, write the correct sentence.

1. False. Permanent tissue arises from meristematic tissue.
2. False. Parenchyma is a simple permanent tissue.
3. True
4. False. Sclerenchyma is a dead tissue.
5. True
6. True
7. False. Cartilage is a type of connective tissue.
8. True
9. True
10. False. Skeletal muscles are voluntary muscles.

C. Choose correct option

1. B
2. D
3. B
4. C
5. A

6. D
7. C
8. C
9. A

D. Answer

1. Meristematic tissue is responsible for the growth of the plants.
2. Tissue that covers the outer surface of the body and lines the organs cavities and other parts of the body is epithelial tissue. It provides protection, helps in absorption and secretion.
3. Areolar tissue packs the spaces between various organelles and keeps them in place. Adipose tissue cushions various parts of the body to protect them from injury and insulates the body against cold.
4. Cartilage is more elastic and thus is capable of absorbing the shock of friction between the bones. (draw a diagram given on page no. 5)
5. Blood is composed of plasma, red blood corpuscles, white blood corpuscles and platelets. Blood transports oxygen, carbon dioxide, digested food and wastes from one part of the body to another. (draw a diagram given on page no. 6)
6. Neuron transmits the message from all parts of the body to brain and spinal cord and vice versa. (draw a diagram given on page no. 7)

E. Answer in brief

1. In absence of cambium, the plants elongate rapidly but their stems do not expand laterally.
2. Simple permanent tissues of plant are of three types: parenchyma, sclerenchyma and collenchyma.

Parenchyma is composed of oval, spherical or polygonal cells which store food and water.

Collenchyma are thick walled and elongated with oblique or tapering ends. Pectin and other substances are deposited in the intercellular spaces. They provide support and flexibility.

Sclerenchyma is made of dead cells that are packed together closely. Cell wall is thick due to the presence of lignin. It provides strength to the body of the plant. (Draw a diagram given on page no. 2)

3. **Xylem and phloem** are complex permanent tissue of plants.

Xylem is made up of dead cells that are either tracheids or vessels and some parenchymatous tissue. Vessels and tracheids are elongated cells with thick lignified walls. It runs through the center of the stem. It transports water and minerals.

Phloem transports food and is living tissue mostly made of sieve cells and companion cells. Sieve cells are elongated cells joined end to end with perforated plates in between them. It is closer to the surface of the stem than xylem. (draw a diagram given on page no. 3)

4. Tendons are bands of white fibrous connective tissue made mainly of collagen fibers and very little elastin. These are strong and flexible and withstand the stress of being stretched. Tendons attach muscles to bones.

Ligaments have more elastin than tendons do. They are more extensible and flexible. They join bones together. (draw a diagram given on page no. 4)

5. Bone is the hardest connective tissue which contains three types of cells: **osteoblasts, osteoclasts and osteocytes.**

Osteoblasts produces a protein mixture that hardens to form bone matrix containing minerals such as calcium, phosphorous and magnesium.

Osteoblasts gets trapped in the matrix and becomes osteocytes.

Osteoclasts help to break down the damaged bone tissue which is replaced by new matrix produced by osteoblasts. (draw a diagram given on page no. 5)

6. Blood without RBCs and few other components leaves the blood capillaries and passes into the spaces between the tissues. This fluid is called as **lymph.**

7. There are three types of muscular tissue **voluntary, involuntary and cardiac.**

Voluntary muscles, also called as skeletal muscles, is made up of long cylindrical fibre like cells.

Involuntary muscles are made of tapering spindle like cells. We cannot control their movement by conscious effort hence the name involuntary muscle.

Cardiac muscle is special type of involuntary muscle found in heart. We have no control over their movement. They are made of branched, fibre like cells that have a banded appearance.(draw a diagram given on page no. 6)